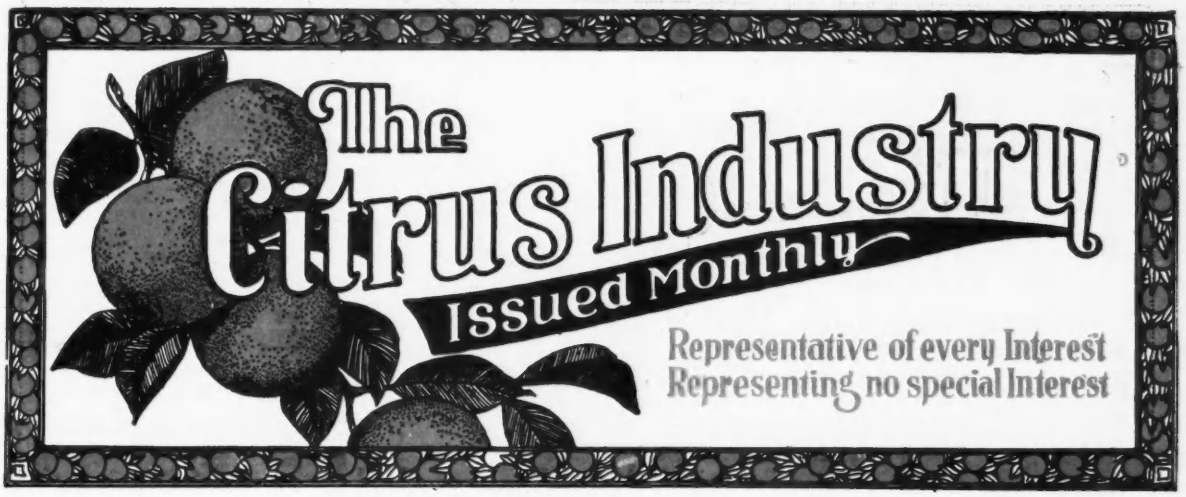

Vol. 12, No. 7 TAMPA, FLORIDA, JULY, 1931 15 Cts. A Copy

Florida, California and Texas Seek To Solve Green Fruit Problem–Result of Efforts Related In This Issue

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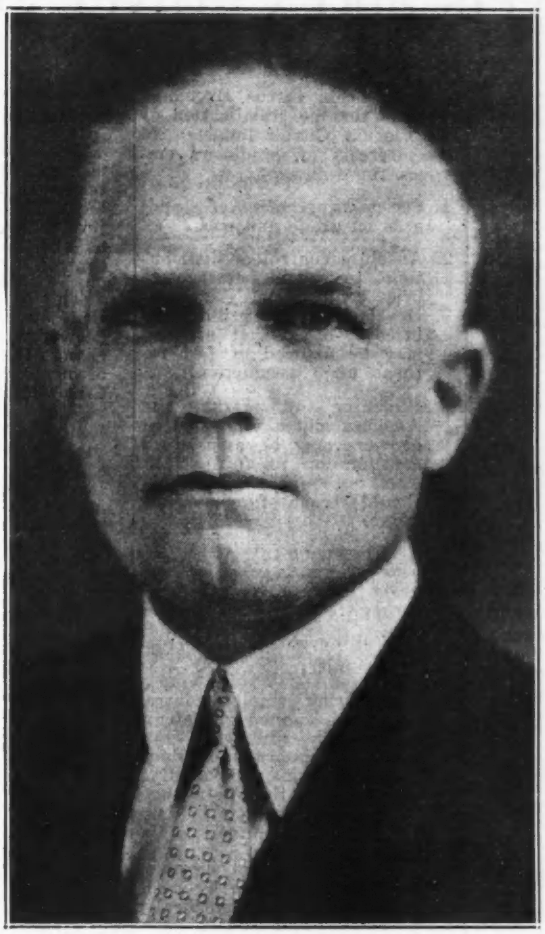

HAYNES HEADS NATIONAL FERTILIZER ASSOCIATION

Bayless W. Haynes of the Wilson & Toomer Fertilizer Company, Jacksonville, Fla., was elected President of the National Fertilizer Association at White Sulphur Springs, Va., on June 10. Mr. Haynes is one of the best known fertilizer men in the State of Florida, and is nationally known in fertilizer circles.

John J. Watson of New York, was elected vice-president, and Charles J. Brand of Washington, secretary-treasurer.

A Constructive Program For Growers and Grower Shippers

Statement of John A. Snively, President of The Florida Citrus Exchange:

In accepting the position of President of the Florida Citrus Exchange, while I greatly appreciate the honor, I am more sensible of the responsibilities it involves even than I am of this expression of confidence upon the part of the Board of Directors with whom I have been associated for so many years.

The experience of the past season demonstrated that there is a market for thirty-five million boxes of Florida Citrus Fruit, for we have sold that many. We can do it again. The problem is to get a better price. The Florida Citrus Exchange management now realizes that a new and aggressive business program must be adopted to take care of the increased production of this state. We never again will have a small crop.

In view of this situation, through the assistance of the Farm Board, of banking institutions in Florida and in the north, of dealers in fruit desiring connections with the largest and most efficient operating organization, we are now building a business and financial program which should appeal to every grower as the answer to Florida's marketing problem.

As officers of the Florida Citrus Exchange, we appreciate the magnitude of the problem. We have summoned to our assistance the best production, merchandising and financial brains. We have assurances of the unqualified support of the Government and of important financial agencies.

We are going forward with this program and we shall surely succeed in the whole of it if the growers cooperate to the extent they should.

It is obvious to every reader that these plans cannot be successful unless the Florida Citrus Exchange controls sufficient fruit as to control the markets and distribution. With such control we can certainly put $1.00 per box additional value into every box of fruit grown in Florida and $1,000 per acre in enhanced grove values.

The Florida Citrus Exchange program for the stabilization of the Florida Citrus Industry in the interests of producers embraces the following:

1. Strict enforcement of standards on grade and pack.
2. Absolute control of distribution to avoid destructive price competition.
3. Development of a minimum price level so that growers may be assured of fair returns upon production.
4. Widening of markets in America and abroad so that growers may be assured of consumption at fair prices even though production should reach fifty million boxes.
5. The development of an all year around marketing program for Florida citrus through:
   A. Full development of frozen juice.
   B. Securing complete control of the canned grapefruit industry, which is a natural monoply and which the Florida Citrus Exchange is the one agency qualified by law to control as a monopoly.
6. Careful study and development of the whole by-products field along scientifically developed and sound business lines.

An aroused Florida Citrus Exchange, well financed, with a determined management, can stabilize the Florida citrus industry just as soon as the growers give us the necessary percentage of control.

This is the growers' organization. As President I pledge every grower within and out of the Exchange that I shall, to the utmost of my ability, make the Florida Citrus Exchange responsive to the wishes and needs of its members. I pledge further that, recognizing the disinterested determination of the Federal Farm Board to make this growers organization predominant in the fruit markets, I will cooperate with the Farm Board in the accomplishment of this purpose which will work a salvation of the Florida citrus growers.

I am gratified to be able to announce that the Board of Directors of the Florida Citrus Exchange and the management have carefully considered this program, that it has their unqualified endorsement, and the growers may be assured that the program will be put through honestly and effectively if sufficient support from the growers is given to assure the necessary control.

We, therefore, appeal to individual growers and to grower-shippers, whose interest in their production is paramount, to join with the Florida Citrus Exchange in achieving this program.

In the last analysis, the growers are the only ones who can organize this industry and are the only ones to be considered.

Jno. A. Snively

Florida Citrus Exchange

Tampa, Florida

The Citrus Industry
EXCLUSIVE SPECIALIZED CITRUS PUBLICATION
Issued Monthly
Representative of every interest
Representing no special interest

Vol. 12 TAMPA, FLORIDA, JULY, 1931 No. 7

Florida's New Green Fruit Law

The new green fruit law enacted at the regular session of the Florida legislature and approved by Governor Carlton on June 10, is of interest to every citrus grower and shipper of the state.

The new law is the result of a compromise between the bill proposed by Commissioner of Agriculture Nathan Mayo which was favored by the House, and what is known as the Parrish bill passed by the Senate.

In most circles, the new law is considered to be an improvement over the old law which it supercedes, but is not satisfactory to many growers or to Commissioner Mayo who is charged with enforcement of the law.

For the benefit of readers, we herewith print the new law in full:

(SENATE BILL No. 783)

AN ACT to Prohibit the Sale or Offering for Sale, the Transportation, and the Preparation, Receipt or Delivery for Transportation or Market of Any Citrus Fruit that is Immature or Otherwise Unfit for Human Consumption, to Provide for the Enforcement Thereof, and to Provide Penalties for the Violation Thereof. Be It Enacted by the Legislature of the State of Florida:

Section 1. That as used in this Act, the word "person" shall extend to and include persons, partnerships, associations and corporations; the word "box" shall refer to the standard size containers now in common use in this State in the packing and shipment of citrus fruit; the words "citrus fruit" shall extend to and include only the fruits Citrus Grandis, Osbeck, commonly and hereinafter called grapefruit or pomelo, and Citrus Sinesis, Osbeck, commonly called sweet or round oranges, and hereinafter called oranges, and Citrus Nobilis Deliciosa, commonly and hereinafter referred to as tangerines; the words "packing house" shall extend to and include any structure or place prepared for and used for packing or otherwise preparing citrus fruit for market or transportation.

Section 2. It shall be unlawful for any person to sell or offer for sale, to transport, to prepare, receive or deliver for transportation or market any citrus fruit, except tangerines, between the 31st day of August and the 1st day of December, and any tangerines between the 31st day of August and the 16th day of November in any year unless such fruit is mature in accordance with the maturity standards provided for in this Act and is accompanied by a certificate of inspection and maturity thereof as defined by this Act, issued by a duly authorized Citrus Fruit Inspector of the Department of Agriculture of the State of Florida. The maturity mentioned in this Act shall be of such number, form, size and character, and shall be used in such manner to identify the fruit to which they relate, as the Commissioner of Agriculture of this State may by rule or regulation prescribe. Inspection for maturity may be made at any time, anywhere, after the fruit is severed from the tree until the shipment, after inspection and certification, is accepted by a common carrier, or until it has been transported beyond the State line where being transported by other than a common carrier, and with the further proviso that shipments in bulk either by common carrier or otherwise to a packing plant for repacking in the State of Florida, must be reinspected and recertified before final delivery to carrier, providing that only one inspection fee is to be paid by the shipper. Provided, that it shall be unlawful during the remaining period from December 1st to August 31st following in each year, for any person to sell or offer for sale, to transport, to prepare, receive or deliver for transportation or market any citrus fruit which is immature according to the standard of this Act or otherwise unfit for human consumption, or for any person to receive any such citrus fruits under a contract of sale, or for the purpose of sale, offering for sale, transportation, or delivery for transportation thereof. Provided, further, that the provisions of this Act

shall not apply to sales of citrus fruit "on the trees," nor to common carriers or their agents when the fruit accepted for transportation or transported by such common carrier is accompanied by a proper certificate of maturity of such fruits as hereinafter provided, nor when accepted by them for transportation during the time when no inspection is required by this Act.

Section 3. That within the purpose and meaning of this Act grapefruit (pomelos) shall be deemed to be mature only when the total soluble solids of the juice thereof is not less than eight (8) per cent, and when the ratio of total soluble solids of the juice thereof to the anhydrous citric acid is as set forth in sub-section A of this Section, and when the juice contents of said grapefruit is not less than the minimum requirements for the respective sizes of said grapefruit as set forth hereinafter in sub-section B of this Section.

(A) The minimum ratios of total soluble solids of the juice of said grapefruit to the anhydrous citric acid are as follows:

1. When the total soluble solids of the juice is not less than eight (8) per cent and not more than nine (9) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and one-half (6½ to 1) to one.

2. When the total soluble solids of the juice is not less than nine (9) per cent and not more than nine and one-tenth (9.1) per cent the minimum ratio of the total soluble solids to anhydrous citric acid shall be six and forty-five hundredths to one (6.45 to 1).

3. When the total soluble solids of juice is not less than nine and one-tenth (9.1) per cent and not more than nine and two-tenths (9.2) per cent the minimum ratio of the total soluble solids to anhydrous citric acid shall be six and four-tenths to one (6.4 to 1).

4. When the total soluble solids of the juice is not less than nine and two-tenths (9.2) per cent and not more than nine and three-tenths (9.3) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and thirty-five hundredths to one (6.35 to 1).

5. When the total soluble solids of the juice is not less than nine and three-tenths (9.3) per cent and not more than nine and four-tenths (9.4) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and thirty hundredths to one (6.30 to 1).

6. When the total soluble solids of the juice is not less than nine and four-tenths (9.4) per cent and not more than nine and five-tenths (9.5) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and twenty-five hundredths to one (6.25 to 1).

7. When the total soluble solids of the juice is not less than nine and five-tenths (9.5) per cent and not more than nine and six-tenths (9.6) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and twenty-hundredths to one (6.20 to 1).

8. When the total soluble solids of the juice is not less than nine and six-tenths (9.6) per cent and not more than nine and seven-tenths (9.7) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and fifteen hundredths to one (6.15 to 1).

9. When the total soluble solids of the juice is not less than nine and seven-tenths (9.7) per cent and not more than nine and eight-tenths (9.8) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and ten hundredths to one (6.10 to 1).

10. When the total soluble solids of the juice is not less than nine and eight-tenths (9.8) per cent and not more than nine and nine-tenths (9.9) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six and five hundredths to one (6.05 to 1).

11. When the total soluble solids of the juice is not less than nine and nine-tenths (9.9) per cent and not more than ten (10) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be six to one (6 to 1).

12. When the total soluble solids of the juice is not less than ten (10) per cent and not more than ten and one-tenth (10.1) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and ninety-five hundredths to one (5.95 to 1).

13. When the total soluble solids of the juice is not less than ten and one-tenth (10.1) per cent and not more than ten and two-tenths (10.2) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and ninety hundredths to one (5.90 to 1).

14. When the total soluble solids of the juice is not less than ten and two-tenths (10.2) per cent and not more than ten and three-tenths (10.3) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and eighty-five hundredths to one (5.85 to 1).

15. When the total soluble solids of the juice is not less than ten and three-tenths (10.3) per cent and not more than ten and four-tenths (10.4) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and eighty hundredths to one (5.80 to 1).

16. When the total soluble solids of the juice is not less than ten and four-tenths (10.4) per cent and not more than ten and five-tenths (10.5) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and seventy-five hundredths to one (5.75 to 1).

17. When the total soluble solids of the juice is not less than ten and five-tenths (10.5) per cent and not more than ten and six-tenths (10.6) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and seventy hundredths to one (5.70 to 1).

18. When the total soluble solids of the juice is not less than ten and six-tenths (10.6) per cent and not more than ten and seven-tenths (10.7) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and sixty-five hundredths to one (5.65 to 1).

19. When the total soluble solids of the juice is not less than ten and seven-tenths (10.7) per cent and not more than ten and eight-tenths (10.8) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and sixty hundredths to one (5.60 to 1).

20. When the total soluble solids of the juice is not less than ten and eight-tenths (10.8) per cent and not more than ten and nine-tenths (10.9) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and fifty-five hundredths to one (5.55 to 1).

21. When the total soluble solids of the juice is not less than ten and nine-tenths (10.9) per cent and not more than eleven (11) per cent the minimum ratio of total soluble solids to anhydrous citric acid shall be five and fifty-hundredths to one (5.50 to 1).

22. When the total soluble solids of the juice is not less than eleven (11) per cent, the minimum ratio of total soluble solids to anhydrous citris acid shall be five and fifty-hundredths to one (5.50 ot 1).

(Continued on page 28)

Rots of Florida Citrus Fruits

By H. E. Stevens and H. R. Fulton, Bureau of Plant Industry, U. S. D. A., Orlando, Florida

There are two general classes of decay in Florida citrus fruits that may impose a heavy tax on the season's crop. These are the Penicillium rots and the stem-end decays. Under the Penicillium rots we have the blue-green and olive-green molds, commonly termed blue molds, familiar and long known troubles in all countries where citrus is produced or offered for sale.

The stem-end rots are a very different type and much more difficult to handle. They attack and break down the inner tissue, causing a rotted fruit that is evident only after a period of time. Apparently sound, healthy fruits are packed and sent on their way to distribution only to arrive in a state of decay, or perhaps later develop decay on the fruit stand and in the household of the consumer. Decay of any kind in fruit is a poor advertisement all along the line, from the shipper, wholesaler, retailer to the ultimate consumer, and it is on the consumer that the success of the industry depends. If he is unfavorably impressed by decay, inferior quality, or poor appearance, this is reflected in the sale volume and price of the product as citrus growers are well aware.

The grower, the packer, the shipper and the buyer are all equally concerned in the problem of decay and each may do his part in keeping it down to the lowest point consistent with economical practices.

Causes of Decay

The rots or decays are caused by small organisms known as fungi. These are microscopic plants that invade and grow in the tissue of mature fruit. Some can attack and destroy apparently sound, healthy fruits. The stem-end rots of citrus fruits are typical examples. Others are wound parasites and require a break in the outer surface of the fruit in order to enter and cause decay. This happens in the case of blue mold rots. Fruits affected by either of these types of decay are not fit for consumption and become a total loss. The consumer will not buy decayed oranges or grapferuit at any price, and he hesitates to purchase fruits that might be susceptible to decay or that have a reputation for poor keeping quality.

The fungi that cause these decays are widely distributed in the Florida citrus groves. They will remain as long as our citrus trees continue to grow and must be accepted as something to be reckoned with in the production of each season's crop. These small plants grow and reproduce just as truly as do our large visible plants. Their minute reproductive bodies or spores are carried about in the air, and in suitable lodging places find congenial conditions for growth and further production of spores. The cycle is continued, probably many times during the season, and an abundance of infectious material is usually present to cause trouble if favorable conditions arise, whether it be in the grove, packinghouse, storage or anywhere that fruit is handled.

During the past twenty-five or thirty years a large amount of attention and study has been given to citrus rots and their control by workers in the United States Department of Agriculture and State Experiment Stations, with a view to finding weak points in the cycles of development of these fungi, and practical methods of rot control. Sufficient information is available in publications of these institutions to materially reduce the decay that occurs each season. Conditions that favor or induce rots should be given the same consideration and study that is given to the care of the citrus grove and the use of various measures to produce the crop.

The grower or shipper with a carload of citrus fruit in any of our leading markets showing 10% to 15% decay can do nothing to remedy the immediate situation. He will be forced to take his loss. The time to prevent such a condition is perhaps before the fruit is matured or when it is picked or at least at the time of packing. It is well to bear in mind that a certain amount of decay, small or large, is apt to occur each season but this amount may be reduced if timely precautions and effort are put forth to avoid it.

It is too late to attempt to save a fruit after decay has started. Preventive or precautionary measures must be taken well in advance of the trouble.

Condition of Florida Citrus Fruit on Arrival in the Markets

A summary is given in Table 1 of Federal inspections by the Food Products Inspection Service of the United States Department of Agriculture on all Florida citrus shipments arriving at the Cleveland market through April* of the current season. Over 90% of the arrivals were in time for auction on the morning of the fifth day after leaving the packinghouse. It is assumed that this tabulation gives a fair indication of the average condition of the bulk of the Florida crop for the 1930-31 season. It will be noted that grapefruit arrived in best condition, tangerines in worst, with oranges intermediate. If 2% is taken as a reasonable tolerance for rot on arrival, grapefruit shows 89%, oranges 83%, tangerines 80%, and all citrus 85% arriving in satisfactory condition, leaving 11%, 17%, 20% and 15%, respectively in the unsatisfactory class. For a tolerance of 3% it may be estimated from the table that about 6% of grapefruit, 11% of orange, 14% of tangerine and 10% of all citrus shipments would fall short of requirement.

Everyone knows that rot lowers selling price. In order to figure how much can reasonably be spent in an effort to control rot, one must have an idea about the degree of lowering as well as the amount of rot that can be expected on the average. Several years ago an effort was made to get price figures to show to what extent various amounts of rot showing up in shipments of oranges influenced the auction prices for 200 size golden grade. Table 2 gives the results for two seasons on the Philadelphia auction and one season on the Chicago auction, with an average for the three seasons in question. If we assume that these orange price discounts on account of rot would hold for the current season and for all varieties, grades and sizes of citrus, and if we assume further that the Cleveland inspections are a fair aver-

*Presented at Meeting of Florida State Horticultural Society in Miami.

*Data for March and April compiled after presentation of paper.

(Continued on page 27.)

Four Laws Passed at Last Session of Texas Legislature to Help Valley Growers

By J. E. McDONALD, Commissioner, Texas Department of Agriculture in Mission "Times"

Quarantine regulations of the state department of agriculture which protect the Rio Grande valley citrus industry—one of Texas' youngest and fastest growing agricultural industries—from plant disease and pest invasion were bolstered up by four laws enacted by the 42nd Texas legislature.

Two of these are of major importance: One defining the citrus zone and declaring the state's quarantines, and the second was aimed at material changes in the handling of fruit prior to marketing, these changes in many respects amounting to innovation. A third bill prescribed penalties for violating quarantines, and the fourth was aimed at the citrus grove raider.

Local sanction of the state's quarantine policy is established in the citrus zone bill, and as such it should be considered in relation to quarantine proclamations issued by the department. It defines the counties embracing the citrus area—a group of €9, of which four Cameron, Hidalgo, Willacy and Webb, ship the bulk of the Texas crop; designates those plant pests and diseases which shall be considered public nuisances; and prohibits the shipment into Texas of nursery stock infected by those pests or diseases.

Since this law is at least a step toward meeting the court decision which declared, in effect, that courts seldom would go beyond the legislatures in judicial determination of whether or not a plant pest or disease is a menace, we feel that it will materially strengthen our quarantine position. The law is based on common sense and reason. We have attempted, in other quarantines affecting interstate movement, to follow this same law of equity and reason, as instance the quarantine allowing the movement of Florida citrus fruit into North Texas—geographically isolated from the Texas citrus belt—during the period when Texas fruit is not moving, a quarantine which has evoked much comment.

Florida Fruit Allowed in North Texas

In allowing Florida citrus fruit to come into North Texas from April to September this year we acted, moreover, in accordance with a policy laid down by the Southern Plant Board, which certainly represents the best thought on the whole subject of quarantines.

Paraphrased, the policy of the Southern Plant Board in regard to quarantines is that the economic effect, i. e., the possible disruption of trade and commerce, as well as pest risk involved, must be considered in establishing regulation. If pest risk can be minimized and the channels of trade left open to flow uninterrupted, our regulation has achieved a double purpose. In the instant case, there is no movement of Texas citrus at this time, our inspectors are free to guard rigidly against shipment of fruit into the citrus area, the fruit is needed in North Texas, and the danger of infection has been reduced to a minimum. In September when our fruit is ready for shipment, inspectors will be recalled to the Valley and the period of free entry lifted, because the reason for its being—a need for the fruit—will no longer exist.

I quote here from the quarantine drawn by our state entomologist, J M. Del Curto who has given years of study to the subject and to meeting the difficult problems constantly arising in quarantine matters:

"The present emergency involving a scarcity of citrus fruit makes it imperative that the commissioner of agriculture take steps to alleviate the present situation with as little risk as possible. The importation of citrus fruit under strict regulatory measures into the northern part of the state during the emergency would alleviate present economic conditions with as little risk as possible * * * as by concentration of inspection forces the state is in a position to maintain the control necessary for the enforcement of this proclamation for the period specified."

Orchard Testing for Maturity

The other principal enactment was, as previously indicated, concerned with the testing of fruit for maturity, in preparation for marketing. Of interest to citrus growers outside of Texas is the revocation of the old policy which required foreign fruits to measure up to Texas maturity requirement — obviously impractical and virtually impossible to enforce—when that fruit already had met the standards of the state of origin. Texas retains the right to test the fruit if there should be a reason for a belief that an evasion of the law was being tested, or if the state of origin has no cumpulsory maturity standards; but in the usual course, fruit from other states will be allowed entry if it passes its native maturity requirements, together with other state regulations.

But outweighing this change in importance is the projected plan of orchard testing for maturity. Previously the maturity test—which is primarily based on the acid-sugar content and acid-sugar ratio of the fruit—was made in storehouses. The result was that when green fruit was found it was ordered destroyed, with consequent regrettable waste. Under the new law, inspectors will go into the groves, start with smallest fruit, and test by sizes until a size is found grading uniformly ripe and mature. Plucking of all fruit of this size and above would then be authorized under a clearance certificate.

Quite obviously, this should result in a trend toward shipment of a larger as well as a riper fruit, for the longer fruit hangs on the tree the more mature it becomes.

We believe this rule can be applied consistent with early marketing, keeping in mind always that Valley growers do not contemplate nor desire ruining the market for the Texas fruit by rushing in with im-

(Continued on page 34)

New California Act Changes Standards for Citrus Fruits

The new California Fruit, Nut and Vegetable Standardization Act of 1931 under which that state's growers are now operating, contains several important variations with regard to citrus fruits. Outstanding among these is a double standard for grapefruit maturity. The standards for citrus under the new law are as follows:

"Citrus fruits shall be mature and free from decay; and free from serious damage, as defined in this section, caused by freezing, drying at the stem or blossom end (resulting from other causes than freezing,) splits, bruises, and punctures, and in case of packed citrus fruits shall be virtually uniform in size. Damage by drying at the stem or blossom end resulting from causes other than freezing shall not be considered serious unless 20 per cent or more of the pulp shows a marked drying or desiccation. Damage from freezing to any one fruit shall not be considered serious unless it causes a drying or desiccation in 20 per cent or more of the exposed pulp as shown on a transverse cut through the center, or causes before the drying process develops a water soaked appearance, or evidence of previous water soaking, or the presence of crystals or crystalline deposit, on the two surface membranes of each of two or more segments, as shown on the separation of the segments one from another, of a section, not less than one inch or more than one and one-half inches in thickness, of the central portion of each end—the evidence of freezing injury to show for the entire length but not necessarily the entire area of the surface membranes.

"The percentage of serious damage by freezing injury or other defects in any lot of citrus fruits, packed, loose, in containers, or in bulk, may be established by inspection of a representative sample which shall consist of not less than 100 fruits. Damage caused by splits bruises or punctures in any citrus fruit shall not be considered serious if the injury is well healed and free from mold or decay.

With the exception of serious damage caused by freezing or drying at the stem or blossom end resulting from causes other than freezing, not more than 10 per cent, by count, of the citrus fruit in any one container or bulk lot may be below these requirements, but not to exceed one-half of this tolerance, or 5 percent, shall be allowed for any damage by freezing injury or by drying at the stem or blossom end resulting from causes other than freezing, not more than 15 per cent by count, of the citrus fruit in any one container or bulk lot may be below these requirements.

"It is further provided that any packed, wrapped citrus fruit which has been in storage or shipped by rail and which fails to meet the requirements of this standard only by reason of brown rot, blue mold, or green mold which has occurred after packing shall not be held for violation of the provisions of this act on account of such deterioration.

"Oranges shall not be deemed mature under the provisions of this act unless the juice contains soluble solids, as determined by a Brix scale hydrometer, equal to or in excess of eight parts of every part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization, and have attained at least 25 per cent of characteristic color before picking; provided, however, that oranges which are at least 70 per cent colored at the time of picking shall be deemed mature if the juice contains soluble solids, as determined by a Brix scale hydrometer, equal to or in excess of six and one-half parts to every part of acid contained in the juice; provided, further, that no oranges may be accelerated in color unless the juice contains soluble solids, as determined by a Brix scale hydrometer, equal to or in excess of eight parts to every part of acid contined in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization.

" 'Twenty-five per cent of characteristic color' in the case of oranges is defined as that color designated by the Munsell color notation as hue four green-yellow, value four, chroma three (4GY4|3), and '70 per cent colored' as hue three yellow, value six, chroma five, (3Y6|5). Oranges shall be considered as having exceeded 25 or 70 per cent color if the average hue of the surface of each fruit is numerically less than four-green-yellow or three yellow, respectively, regardless of the other components of the color.

"Grapefruit shall not be deemed mature under the provisions of this act unless the juice contains soluble solids, as determined by a Brix scale hydrometer, equal to or in excess of five and one-half parts to every part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization, and have attained at least 25 per cent of characteristic color before picking; provided, however that grapefruit which are at least 70 per cent colored at the time of picking shall be deemed mature if the juice contains soluble solids, as determined by a Brix scale hydrometer, equal to or in excess or five and one-half parts to every part of acid contained in the juice, the acidity of the juice to be calculated as citric acid, without water of crystallization; provided, further, that in view of differences in climatic conditions prevailing south and east of San Gorgonio Pass, which results in the grapefruit grown in that area having, at maturity, a higher percentage of soluble solids to acid than the mature grapefruit grown in the area north and west of said San Gorgonio Pass shall not be deemed mature unless the juice contains soluble solids equal to or in excess of six parts to every part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization and has attained at least 25 per cent of characteristic yellow color before picking; provided, further, that in the event that the maturity standard fixed for that area south and east of the San Gorgonio Pass should be declared void it is the intent of the

(Continued on page 34)

The Citrus Industry

with which is merged The Citrus Leaf
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CHICAGO REPRESENTATIVE:
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CLEARING HOUSE TO FUNCTION

Decision of the Florida Citrus Growers Clearing House to continue its functions in the interest of Florida citrus growers was emphatically announced at the annual meeting of the Association held in Winter Haven on July 14. This announcement was made in the face of the withdrawal of the Florida Citrus Exchange and the repeated assertions that the action of the Exchange is final.

Some change in the personnel of the directorate is made necessary by the resignation of four directors whose membership in the Exchange made such action necessary. These directors are J. T. Swann, Tampa, District No. 2; E. E. Truskett, Mount Dora, District No. 3; W. F. Glynn, Crescent City, District No. 4; and Phil C. Peters, Winter Garden, District No. 5. Successors will be named from a list of names to be proposed by the Committee of Fifty, of which M. O. Overstreet of Orlando is chairman.

Reports of the work accomplished during the past year were submitted by President A. M. Tilden and General Manager A. M. Pratt, and plans for the future work of the Association were announced. One of the outstanding features of the reports was that which showed that Florida oranges during the past season outsold California oranges by an average of 11 cents per box, and that whereas the California crop sold at 39 cents per box less than the 1929 crop, the Florida crop brought 37 cents per box more than the crop of that year. According to Manager Pratt, much of the credit for this condition was due to Clearing House activities.

A telegram from Chase & Co., owners of thirteen packing houses with an output of approximately one million boxes, gave assurance that the company would continue its affiliation with the Clearing House as a shipper member.

Assurances of support of the Clearing House were given by J. S. Crutchfield, Pittsburgh, Pa., president of the American Fruit Growers Inc., Senator M. O. Overstreet, Orlando, O. F. Gardner, Lake Placid, and others.

A resolution by the Committee of Fifty called upon the Association to launch a membership campaign and pledged the support of that Committee in such a drive. Support of the Clearing House as the best medium for coordination of the industry was the keynote of the speakers and the underlying sentiment of the growers and shippers at the meeting.

GREEN FRUIT LAWS

The Citrus Industry in this issue presents the recently enacted "green fruit" laws passed by the legislatures of Florida, California, and Texas.

None of these laws, it appears to us, are perfect—few laws are; none, it appears to us, are adequate to correct the evil at which they are aimed. On the whole, the Florida law appears to be fully as effective as those of either California or Texas. This does not mean that the Florida law is not susceptible of improvement, but it does mean that Florida is not alone in the matter of failing to provide adequate protection against the shipment of green or unfit fruit.

Possibly each of the citrus producing states may improve its green fruit laws at the next session of the several legislatures.

With a membership drive by the Florida Citrus Exchange under full swing, a membership drive by the Florida Citrus Growers Clearing House Association being seriously considered, and with the Fruitmen's Association extending an invitation to all fruit men to join that Association, it would seem that there will be no lack of "organizations" among Florida citrus growers and shippers; albeit the "organizations" may be somewhat divided. Let us hope they may not also be antagonistic.

An owner of a Florida citrus grove residing in Atlanta, Ga., writes a Florida publication that neither the Florida Citrus Growers Clearing House Association nor the Florida Citrus Exchange has ever "benefitted a Florida citrus grower." Yet we question seriously whether even this grower would like to see either of these organizations crowded out of the citrus picture.

It is to be hoped that with all this turmoil about marketing organizations and marketing systems, the grower will not lose sight of the fact that the first essential of any successful marketing program is the production of quality fruit.

California has a double standard for grapefruit. Which is about as important to the outside world as would be a double standard for Florida lemons.

The solution of our marketing problems are important. The solution of our production prolems are imperative.

IMPRESSIONS

By the Impressionist

With the passing of Alexander St. Clair Abrams at Jacksonville recently Florida lost one of its legal lights of all times, and South Florida lost one of the big men in the palmy days of the old citrus industry prior to the Big Freeze. A Confederate soldier at the age of 16, later partner of Henry W. Grady in the publishing business, Col. Abrams was the founder of the town of Tavares, and of Lake County; and for many years was an outstanding figure. In recent years he had lived in retirement, but not in obscurity.

A contemporary of the late Robert W. (Col. Bob) Davis of Gainesville, older Floridians treasure many memories of their legal and political tilts and affiliations. One such legend is, we believe, about the funniest story we know: Aboard a St. Johns River steamer journeying from Sanford up to Jacksonville with a group of stalwart democrats to attend a state convention, the pair left the boat at Green Cove Springs to wander about. Next morning they awakened in the local jail.

"Let's get a quick hearing, give fictitious names, pay our fines and light out. Got to keep this quiet," said Col. Abrams. This was agreed upon.

"What is your name and where do you live?" This was the question addressed to Col. Abrams by the justice.

"John Smith, Arcadia, Florida," replied Col. Abrams.

"What is your name and address?" This question to Col. Davis.

"My name, sir," said Col. Davis, drawing himself up with dignity, "is Alexander St. Clair Abrams, of Tavares, Florida."

Despatches record the death at San Antonio, Texas, of Walter S. Barret, former Tampan, and once well known in the Florida citrus field for his connection with the old Buckeye Nurseries. It was Walter Barret who once each season, in a particular moon, journeyed into the Everglades there to meet and trade with the Seminoles for the seeds of the rough lemon which they had gathered. At that time each year he and one or more other white traders would meet the Indians at a designated spot. After some entertainment, on a certain morning the trading for rough lemon seeds would begin. Each trader took his seat upon one end of an outspread blanket, so separated from his fellow traders that no trader could see the other. Each trader's money, all in silver dollars, was stacked at the trader's end of the blanket. From time to time male members of the tribe, each alone negotiating for himself, would find seats at the other end of the blanket. The Indian carried his rough lemon seeds in a buckskin pouch, or pouches. These he would empty out in front of him. These the white trader would scan for quantity and quality; then in front of his knees the white man stacked silver dollars to the amount he deemed adequate. The Indian either took it or left it. If the amount was to the Indian's mind satisfactory the trade was quickly made, the rough lemon seeds passing into the white man's possession. If the Indian deemed the offered price unsatisfactory, he brushed the seeds back into the pouch, got up and departed, either to seek another opportunity to trade elsewhere, or, if wholly dissatisfied, to withhold the seeds he had gathered to another trading period a year hence.

And Jeff Chaffin, of Tavares, the well known Jeff of the State Plant Board, won one of the Orlando Morning Sentinel's prizes recently for the Biggest Fish. We assume that in this instance the fish was duly weighed and authenticated. It would have been if we had run the judging.

That Blue Bird Barbecue south of Sanford on No. 3 Highway certainly does put out good eats; and part at least of its prosperity is due to the unstinted patronage of N. H. (Pete) Harper of New Smyrna at times when he is passing. Pete is the man who never eats breakfast; and then never overlooks an opportunity to eat at any other hour of the day.

Don't remember who it was started the yarning, but when it got around to R. B. Woolfolk he told of a greenhorn trucker in Texas who made an express shipment of beets to the Chicago market after carefully cutting off the tops. A wire came that beets without tops were unsalable in Chicago, to which he sent quick reply: "Hold the beets, am expressing the tops today."

We were about to award him the brown derby with palms when Frank Beatty of Cocoa and Mims told a tale of another beginner at the business of trucking over on Merritt Island who went in for raising beans. He picked his first beans and sent them to Jacksonville; and directly a letter came back saying he had picked them just a little too early; that more mature they would sell better. He sent forward another picking, and in the first mail got another letter to the effect that he had waited overlong; that this shipment was just a bit too mature. So he went out into the field, pulled up a few hundreds of pounds of vines by the roots and shipped them; at the same time sending a letter saying: "If you are so darned particular pick the beans off to suit yourselves, as for me I am going back to work for the East Coast Railroad."

And the brothers Gentile now evidence their faith in the industry by adding to their holdings through the purchase of the 65 acre Hiatt grove southeast of Orlando.

The election of Bayless W. Haynes, president of Wilson & Toomer Fertilizer Co., to the presidency of the National Fertilizer Associatioon naturally enough is a very great compliment to Bayless W. Haynes and the W. & T. organization he serves, but to our mind is a distinct compliment to the Florida fertilizer indus-

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CITRUS COMMENTS

—BY—

Charles D. Kime, Orlando, Florida

This department is devoted to furthering horticultural interests of Florida. Letters of inquiry, discussion or criticism will be welcomed

The Use of Manganese Sulphate Proving Profitable

Among the groves of the State some occasionally show up that have responded to unusual treatment, whereas previously they were classed as unprofitable. Tests made with such unusual materials as manganese sulphate are of interest to us because of the results secured.

The following cases are given in detail because of their interest and possible application in other locations.

A general criticism is in order regarding them, First, they are of rather short duration, but in spite of this are actually within that class of results which can usually be expected to remain constant. Second, the soil pH is not given. The pH content is the apparent deciding factor in results and is on the reverse of the usual procedure. That is, the result sought is to reduce the excessive alkalitivity. As no check is kept of this occurance, part of the value of the tests are lost though it is not too late to get comparative data even yet. A test made between the trees receiving the manganese sulphate and adjacent trees still showing the original condition would be of intense interest.

Another interesting point in the cases cited is the use of sulphur. The cases are not conclusive on this point. That is, there is no supporting evidence that would permit us to say sulphur secured a part of the result or actually took no part in the improvement.

There is a big field for the use of such materials so that no apology is needed for giving them here, but rather, the grower is in need of more such cases to assist further in quality fruit production.

Locations and names are omitted, but these will be gladly furnished anyone interested on request. All of the cases are from the central East Coast Section, where the very highest quality of fruit is produced. They were carried thru by growers and were under observation of a County Agricultural Agent.

Tests

Grove No. 1. This grove is a thirteen year old grapefruit grove, one portion of which is planted on a very heavy pure marl type of soil. The trees were originally budded to oranges, but since the orange makes such a poor growth on heavy marl, the trees were top budded on grapefruit, a few years ago, in the hope that the grapefruit would make a satisfactory growth, but none of the trees in this particular portion, grew normally but were always in a chlorotic, "Frenched" condition, with poor vegetative growth. The owner has tried various methods to overcome this chlorotic condition, such as top dressing with liberal quantities of stable manure, trash, litter, etc., but without any results.

The first application of Manganese Sulfate I applied was January 23, 1928, using one pound to the tree. On July 14, 1930 another one pound application was made. Today the tree has a more normal healthy look than the other trees in the row. But the results are not entirely satisfactory, so we must infer that this small amount is not sufficient to overcome the soil condition.

On February 11, 1930 a tree was selected in another row. This tree was an average tree, showing an advanced stage of chlorosis. I went to the extreme on this tree and applied 10 pounds of Manganese Sulfate and 10 pounds of Sulphur. On July 14, 1930, I applied 10 pounds of Manganese again, and on October 3, 1930 I applied another 10 pounds of Manganese Sulfate. This tree stands out as far as you can see. The color is normal and the tree is putting on a vigorous new growth and bloom, while the other trees in the row on the same soil type are pale, chlorotic, with a poor growth showing up.

On February 11, 1930 another tree was selected in another row and was given a 5 pound application of Manganese and 5 pounds of Sulphur. This tree stands out from its neighbors, but the growth is not as satisfactory nor the color as good as the tree receiving the larger amounts.

Grove No. 2. This grapefruit grove is 15 years old, located on very heavy marl. The trees have made a very unsatisfactory growth in the past few years, with a yellow chlorotic color to the leaves. The trees look hard and underfed, while as a matter of fact, they have had ample supplies of commercial fertilizer.

On July 17, 1929 I applied 2 pounds of Manganese Sulfate and on May 26, 1930 I applied 5 pounds more of Manganese Sulfate.

At this date, March 13, 1931, the treated tree stands out distinctly from the other, is normal color, and is putting on a good growth. Before the Manganese treatments were applied this tree was the least thrifty in the section.

I would conclude that the 5 pound applications should be continued for

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BLUE GOOSE NEWS

Monthly News of American Fruit Growers Inc. *Edited by The Growers Service Department*

MAINE POTATO BODY NOW JOINED IN AFG RANKS

Of considerable interest in produce circles was the recent announcement that Maine Potato Distributors, Inc., well known New England organization, had joined the Blue Goose ranks and merged into the American Fruit Growers Inc.

Under the arrangement the Washburn (Maine) office of the American Fruit Growers Inc. will be operated as part of Maine Potato Distributors Inc. of Boston. Andrew J. Beck and Harry E. Humphrey, long connected with the American Fruit Growers Inc. operations in Maine will remain in charge there. Maynard H. Beal, salesmanager and directing head of Maine Potato Distributors Inc. since the inception of that organization, will remain in charge of potato operations in Boston, assisted by William Whitaker and others formerly associated with him there.

Both Blue Goose trademarked Maine potatoes, and the well known Whel brand of Maine Potato Distributors Inc. now will be sold in the markets by American Fruit Growers Inc.

Maine Potato Distributors Inc. will retain its identity, but becomes a unit of the American Fruit Growers Inc., in much the same manner that the Northwestern Fruit Exchange of Seattle marketing agency for the Skookum Packers Association, (the great cooperative packing and shipping organization of northwestern apple growers) has been accustomed to function for a good many years.

The merger deal which had come in for considerable advance publicity in produce trade papers, and which had been under discussion for some time, became a fact on June 2, when papers were finally signed at a meeting in Boston with Andrew J. Beck and C. W. Brown, treasurer of the national organization of the American Fruit Growers Inc., and Maynard H. Beal, directing head of Maine Potato Distributors Inc. participating.

WEIRSDALE PACKING CO. CLOSES BIG SEASON

The annual meeting of the Weirsdale Packing Co., held at the packing house at Weirsdale in Marion County on June 29, showed this popular and efficient packing institution to have handled a very large tonnage during the season just closed.

Directors for the ensuing year are H. L. Borland, Jas. J. Taylor, R. B. Woolfolk and E. B. Lytle. Officers elected are H. L. Borland, president; Jas. J. Taylor, vice-president; E. B. Lytle, secrtary and treasurer; G. D. Wing, assistant secretary and treasurer.

ANNUAL MEETING AT ALVA CALOOSAHATCHEE GROWERS

Marking the completion of the first season of operations in its new packing house at Alva, the annual meeting of the Caloosahatchee Valley Growers Inc., wide awake shipping organization of Lee County, took place on June 18.

Directors elected were E. M. Adams, G. M. Heitman, A. B. Michael, R. B. Woolfolk, and H. S. Parkinson. Officers elected were E. M. Adams, president; A. B. Michael, first vice-president; G. M. Heitman, second vice-president; R. B. Woolfolk, secretary and treasurer; G. D. Wing, assistant secretary and treasurer.

The former packing house at Alva of Caloosahathcee Valley Growers Inc. was wholly destroyed by fire late last summer. The new packing house, one of the most modern and efficient of its size in the state, was built in record breaking time in order to be ready for this past season's activities. In operation it proved itself a splendid asset.

WIDE DISTRIBUTION BY AFG OF FLORIDA CITRUS

It is only natural that a shipping season which was distinguished by the largest tonnage of Florida citrus fruit ever to be handled by the American Fruit Growers Inc., should be likewise a period of widespread sales distribution of that fruit.

The shipping season recently closed saw the American Fruit Growers Inc. handle the largest volume of Florida citrus fruit since the organization of this seling agency. Analysis of the distribution of that portion of the crop handled by the American Fruit Growers Inc. shows not only sales proportionately widespread but so widely distributed as to constitute something of an achievin the selling of Florida citrus fruit.

Despite the large volume of citrus fruit coming to market simultaneously from other producing sections within the United States the Florida Division of the American Fruit Growers Inc. was able to sell Florida oranges in thirty-six states and Canadian provinces during this past season. In addition, the volume of sales of Florida oranges through the larger distributing centers in the more eastern states developed to very large proportions.

Sales records in the Orlando offices show that Florida grapefruit was sold by the American Fruit Growers Inc. in thirty-nine states and Canadian provinces. The volume of Florida grapefruit sales in the larger customary markets also showed large increase; but was affected to some extent by the competition of canned grapefruit after Christmas. The canned product, offered through retail stores as low as two No. 2 cans for twenty-five cents in many cities, undoubtedly tended to curtail the public's otherwise anticipated consumption of the lower grades of

(Continued on page 2)

BLUE GOOSE NEWS

OF INTEREST to the citrus growers of Florida, each month, contained in four pages of paid advertising from the

AMERICAN FRUIT GROWERS INC.
Florida Division
Sixth Floor, State Bank Bldg.
ORLANDO, FLORIDA

THIS "SECTION"

Without any change otherwise, either in intent or fact, the Blue Goose News as put out monthly from the Orlando headquarters of the Florida Division of the American Fruit Growers Inc. has become, in phraseology, the Blue Goose News Sectioon of THE CITRUS INDUSTRY.

The change is wholly and solely one of phraseology. It has been made in response to request of the Post Office Department upon THE CITRUS INDUSTRY, and only to satisfy the technical requirement of the Post Office Department with respect to publications enjoying the second class mailing privilege.

Under the mistaken impression that so long as paid advertising was plainly marked as such it had no interest for the Post Office Department, provided, of course, it contained nothing concerning any lottery nor indecent subject, we had fallen into a technical error. We are glad to correct it.

Because part, at least, of the Blue Goose News Section each month takes the form of reading matter, we have been at pains ever since it first was inserted as paid advertising in THE CITRUS INDUSTRY to distinguish it as advertising by insertion of the "Adv." at the bottom of each page. We had thought that sufficient to satisfy the postal requirements, and to make clear to all concerned the precise status of these four pages in each monthly issue of THE CITRUS INDUSTRY.

While we are very glad indeed to comply with the Post Office Department's requirements, in whatever manner, we will express the hope that this change which has been made will not in any way confuse the readers of these pages, now or in the future. As we have from time to time stated herein, there is no connection whatever between the American Fruit Growers Inc. and the Associated Publications Corporation, the publisher of THE CITRUS INDUSTRY, other than the ordinary business transactions between publisher and advertiser. The American Fruit Growers Inc., by itself or any officer or agent, holds no stock in the Associated Publications Corporation; and no officer or stockholder of the latter corporation owns any stock in the American Fruit Growers Inc.

Adv.

WIDE DISTRIBUTION BY AFG OF FLORIDA CITRUS

(Continued from page 1)

fresh grapefruit.

Florida tangerines obtained a larger volume of sales throughout the eastern states than ever before; and at the same time obtained a more widespread geographical distribution than ever before in the history of tangerine production in Florida.

The sale of solid carloads of tangerines by the American Fruit Growers Inc. showed a very large increase. During the peak of tangerine shipments the Orlando sales force turned attention to developing new markets for tangerines in solid carlots with very gratifying results. Not only were many such carlot tangerine shipments diverted away from customary markets already overloaded by Florida tangerine shipments, but tangerines were successfully sold by the AFG organization in at least two western states where never before had tangerines been taken in solid carloads. The inclusion of tangerines in numerous mixed carloadings also aided materially in widennig the geographical distribution of tangerines far beyond previous limits.

Oranges, grapefruit and tangerines during this season were consumed by the American public in unprecedented volume. Consumption was aided materially by the fact that the retail prices of all citrus fruits (for the first time in the history of citrus production) corresponded with the prevailing wholesale prices in the markets. The public got its citrus fruits cheap; and therefore consumed them at a record breaking rate despite the business depression prevailing during Florida's shipping season. The beneficial effects of this widespread and general consumption of citrus fruits upon the affairs of citrus producers should be twofold. Future seasons ought to manifest the demands of many thousands who heretofore had not been citrus consumers. The greatest benefit to the citrus producing industry, however, ought to be expected from the changed merchandising methods of the retail fruit trade. During this past season thousands of retailers have learned how to make money out of citrus fruits by pricing them low, and obtaining their profits through quick turnovers and a large volume of sales. This is in marked contrast with the previous selling policies of many retail stores.

Perhaps the most obstinate handicap against the greater distribution of oranges, grapefruit and tangerines over the period of the last twenty-five years has been the policy pursued by a large number, perhaps the majority, of fruit retailers in classing these fruits as luxuries or semi-luxuries at least, and maintaining fairly high price levels at all times regardless of wholesale prices. This policy has tended to curtail the public's consumption, even when such fruits were cheap and plentiful in the wholesale markets.

Now, if the experience of the past is to result in a reclassification of citrus fruits in the mind of the retail trade, and oranges, grapefruit and tangerines henceforth are to rate as among the American public's necessities, priced and merchandised as such, there may yet be reason for Florida growers to look back upon the shipping season of 1930-31 as one of the most profitable in history.

As a pioneer in the export of Florida citrus fruits in volume, and long a leader in export activities, the American Fruit Growers Inc. has occasion to be very gratified at the continuing increase in the volume of its Florida shipments abroad. This past season not only saw foreign shipments of the Florida Division reach new high figures; but there is plentiful evidence of continued broadening of foreign consumption. Not only were export prices realized at gener-

"... These are the two laws which a species must conform to if it is to be preserved ... If, among the young, benefit were proportioned to efficiency, the species would disappear forthwith; and if, among adults, benefit were proportioned to inefficiency, the species would disappear by decay in a few generations... The only justification for the analogy between parent and child, and government and people, is the childishness of the people who entertain the analogy."

Herbert Spencer

"The Principles of Ethics" (1893)

ally satisfactory levels, but the growing popularity of Florida's offerings was self-evident.

WINTER HAVEN GROWERS HONOR R. B. WOOLFOLK

Unusual honor was done R. B. Woolfolk, vice-president of the American Fruit Growers Inc. by growers of the Winter Haven district when at the recently adjourned annual meeting of Winter Haven Growers Inc. he was unanimously chosen president of that packing and shipping organization.

Winter Haven Growers Inc. is a grower-owned and grower-controlled organization of that community. The American Fruit Growers Inc. owns no stock in the corporation, and Mr. Woolfolk personally owns but a single share to enable his participation in meetings. His election therefore was the spontaneous action of the interested growers, and wholly a tribute to his leadership and business ability. At the time this is written he has neither accepted nor declined the election which came as a surprise to him; but apparently is debating the question of whether or not time may be found which can properly be spared to the duties of the office.

Directors elected at this meeting were R. B. Woolfolk, John F. May, A. R. Klemm, W. M. Hampton, B. B. Marshall, A. J. Pruden and J. E. Crump. Officers elected were R. B. Woolfolk, president; A. R. Klemm, first vice-president; J. E. Crump, second vice-president; and John F. May secretary and treasurer.

FELLSMERE GROWERS INC. HOLD ANNUAL MEETING

Fellsmere Growers Inc., the progressive shipping organization of the citrus growers in the vicinity of Fellsmere on the lower East Coast, held its annual meeting and election there on June 15. Plans for improving the house and the packing machinery were approved.

Directors elected were R. E. Mudge, Wm. E. Feazel, G. F. Green, R. B. Woolfolk, A. B. Michael and S. D. Gaines. Officers selected for the coming year are R. E. Mudge, president; A. B. Michael, vice-president; R. B. Woolfolk, secretary and treasurer; G. D. Wing assistant secretary and treasurer.

BREVARD PACKING CO. IS MAKING FINE SHOWING

The annual meeting of the organization of the Brevard Packing Co., at Mims in Brevard County, was held on June 15. Review of the past season's activities for the growers of that community was generally quite satisfactory, and showed substantial progress.

Officers of this organization are P. W. Roberts, president; C. N. Williams, first vice-president; A. B. Michael second vice-president; R. B. Woolfolk, secretary and treasurer; G. D. Wing, assistant secretary and treasurer. Directors include P. W. Roberts, R. B. Woolfolk, A. B. Michael, and C. N. Williams.

A. S. HOYT MADE ASSISTANT CHIEF OF PLANT QUARANTINE AND CONTROL

Avery S. Hoyt has been appointed Assistant Chief of the Plant Quarantine and Control Administration, U. S. Department of Agriculture, effective immediately (June 29), Lee A. Strong, Chief of the Administration, announced recently.

Several months ago Mr. Hoyt joined the administration in its European corn borer and Japanese bettle work but it was not until the latter part of May that he was able to have his resignation accepted as Director of Agriculture of California. Mr. Hoyt qualified in the civil service examination and accepted the appointment as assistant chief.

Mr. Hoyt has had long experience in plant quarantine work. He entered the port inspection service of the State of California in January 1912. He held responsible posts in the field of plant quarantine for several years, was in business for himself for a period of years, and returned to the California Department of Agriculture in February, 1928. In December 1929, he was made Assistant Director of the California Department of Agriculture and in February 1931, was appointed director.

Mr. Hoyt graduated from Pomona College where he specialized in entomology. He is well known in the western part of the United States and comes to the Administration with training and experience which well fit him for his work as Assistant Chief, says Mr. Strong.

Mr. Hoyt succeeds to the office vacated by S. A. Rowher, who was transferred, April 1, 1931, to the Bureau of Entomology as Assistant Chief of that bureau.

Loganberry Jelly

4 cups (2 lbs.) juice
7 1-2 cups (3 1-4 lbs.) sugar
1 bottle fruit pectin

Use only fully ripened berries. Crush thoroughly and drip through jelly bag. Do not drip over night as uncooked juice ferments quickly. Measure juice and sugar into large saucepan, stir, and bring to a boil. At once add fruit pectin, stirring constantly and bring again to a full rolling boil and boil 1-2 minute. Remove from fire, let stand 1 minute, skim, pour quickly. Cover hot jelly with film of hot paraffin; when jelly is cold, cover with 1-8 inch of hot paraffin. Roll glass to spread paraffin on sides. Makes about 11 8-ounce glasses.

Why All This Silence?

(For three weeks a challenge inviting debate upon the merits of the Clearing House has been published in every newspaper in the citrus belt.)

FLORIDA CITRUS GROWERS CLEARING HOUSE ASSOCIATION

TO date, no individual nor organization has accepted the challenge issued by the Clearing House! The only possible conclusion must be that the Clearing House represents a sound idea and that it is proving the most practicable available solution to our major industry problems. Else our challenge would certainly have been answered.

WE know of no higher tribute that could be paid the Clearing House than this very same silence. Certainly the refusal to accept the challenge is not due to timidity, for selection of the time, place and debater was left to any one who might wish to accept it.

TO the Clearing House, this silence is more potent than any other form of endorsement that could have been accorded us. The explanation MUST be that the Clearing House is sound and that it is doing an industry job well. While the Clearing House would welcome the privilege of a public debate, we are even better satisfied to have confirmed by the people of Florida the fact that this organization is essential to the industry.

CERTAINLY this evidence of approval should dissipate any question as to the continuance of the Clearing House.

THE Clearing House is operating and will continue to function without interruption.

Don't be misled into thinking otherwise!

FLORIDA CITRUS GROWERS CLEARING HOUSE ASSOCIATION

Citrus Program At Farmers' Week

Beginning with a tour of all departments of the College of Agriculture and Experiment Station farms on Monday afternoon, August 10, and closing with a laboratory study of citrus diseases and insects on Friday morning, August 14, the citrus program for Farmers' Week this year is one of unusual interest. All Farmers' Week programs will be held at the College of Agriculture in Gainesville during the period August 10 to 14, and all Florida citrus growers, farmers, and their families are invited to attend.

On the tour around the farms and grounds on Monday afternoon, visitors will have opportunity to get an insight into just what is going on at the Experiment Station. Here is where considerable information on citrus and other subjects is being obtained, and it is believed that such a tour will be welcomed by the growers.

Tuesday morning the program will open with a talk on pumpkin bug control by J. R. Watson. Other talks will be: The Cryptolaemus Ladybeetle as a control for mealybugs, L. W. Ziefiler; natural and artificial control of scale-insects and whitefly, Dr. E. W. Berger; rust mite and six-spotted mite control, J. R. Watson; and the relation of airways development to plant quarantine, Dr. J. H. Montgomery.

For Tuesday afternoon the following talks have been tentatively scheduled: Negative results obtained in an intensive search for the Medfly, W. W. Yothers; effect of arsenic and copper bait sprays on citrus fruits and trees, and on entomogenous fungi and citrus insects, Dr. Ralph L. Miller; and mushroom root rot, Dr. A. S. Rhoads.

A discussion of citrus disease problems by Dr. W. B. Tisdale will open the Wednesday morning program, and will be followed by a talk on citrus disease and insect control as affected by cultural practices, E. F. DeBusk. Following this, Mr. DeBusk will also discuss increasing the size of tangerines by thinning, D. E. Timmons will talk on seasonal price changes of tangerines by sizes and grades, E. H. Hurlebaus will talk on problems in grove irrigation, and J. H. Jefferies will delve into the subject of rootstocks and propagation of citrus, a subject on which he has some interesting experimental information.

On Wednesday afternoon the citrus group will join with the truck crops group for discussions on economic subjects, principally cooperative marketing. M. A. Brooker and Dr. H. G. Hamilton will speak on the status of cooperative marketing in Florida. Their talks will be followed by a roundtable discussion on methods of financing the grower, with representatives of the Florida Citrus Exchange, Hastings Potato Growers' Association, Sanford-Oviedo Truck Growers' Association, Manatee County Growers' Association, and Florida East Coast Growers' Association leading the discussion.

(It will be noted that the Farmers' Week picnic, an annual event of Wednesday afternoon in past years, will not be held this year.)

Thursday morning's program will be devoted principally to fertilizers, with the following talks scheduled: Growth and yield of grapefruit as affected by nitrogen fertilizer, R. S. Sidsall; fertilizer practices found in citrus production cost studies, W. R. Briggs; accumulation and availability of phosphates as found in citrus grove soils, Dr. O. C. Bryan; grove management on the East Coast, E. L. Lord; and present fertilizer recommendation, D. R. W. Ruprecht.

The Thursday afternoon program will be given over to the following talks: Present status of the frozen juice industry, Dr. A. F. Camp; status of the tung-oil industry, Harold Mowry; the Sub-Tropical Experiment Station, and what it is doing, Dr. H. S. Folfe; and maturity studies of avocados, Dr. A. L. Stahl.

As already stated, the Friday morning program, will consist of a laboratory study of citrus insects and diseases. It will be made in the Experiment Station laboratories.

In addition to the citrus program, there will be sections devoted to livestock and farm crops; truck crops; beekeeping; poultry; and women's interests. Every day from 11 to 12, an outstanding speaker will bring an inspirational message to all visitors.

As usual, the University of Florida is making its dormitories available for use by Farmers' Week visitors. The charge this year will be $1.15 a day, room and three meals. There will be no other charge connected with a visitor's stay in Gainesville.

Officials in charge of the program are urging all those who can possibly do so to attend the week's events this year.

Skinner Reports Good Outlook For Packing House Equipment

Evidence of improvement in the packing house situation, and particularly in regard to Florida, is seen

in the recent announcement of B. C. Skinner, president of the Florida Citrus Machinery Co., that his plant is now operating on full time, with sufficient orders ahead to guarantee full time operations up to the middle of October at least.

"The next three months will show unusual activity and we have got to rush to fill the orders," Mr. Skinner said. "Several big packing and canning plants are being planned. Our company has just got an order from J. J. Parrish of Titusville for a big packing house to cost around $27,500. Meanwhile, we are building equipment for packers outside of the United States. But the upward move-

ment in Florida is the most significant. I expect to see our plant working at capacity from now until the middle of Octobr, if not later."

ENTRY OF "FROZEN PACK" FRUIT PERMITTED

Lee A. Strong, Chief, Plant Quarantine and Control Administration, Washington, D. C., has announced that, under permit and inspection, frozen pack fruit, other than avocados from Mexico and Central America, may enter the continential United States from all foreign countries and the Territories of Porto Rico and Hawaii. The fruit must be cooled to a temperature of 20" F. after freezing and be at or below this temperature in all parts of the package when it is inspected before unloading at the ports of entry. This methods of preparing fruit for market is successful with soft fruits in some sections of the United States and it is believed that it may be employed to advantage with certain tropical fruits. The low temperatures to which the fruit is exposed by the frozen pack process have been found to be highly effective in destroying the maggots of fruit flies which may be infesting the pulp of the fruit.

SKINNER WINS AIR RACE AT BATON ROUGE MEET

B. C. Skinner, of Dunedin, Fla., president of the Florida Citrus Machinery Co., won the sportsman's pilot race for ships of more than 500 cubic inches and also placed third in the free-for-all and second in a bomb-dropping contest at the air meet at Baton Rouge, La., on June 22, in connection with the opening of the new airport. He flew a Wasp Stinson.

Lester Glasscock, also of Dunedin, won the race for cabin ships, placed fourth in the free-for-all for ships of less than 800 cubic inches. He placed second in dead-stick landing. His plane was a Stinson.

Mr. Skinner, accompanied by his wife, son and nephew, left after the race to fly back to Dunedin. Glasscock accompanied by Norman Allen, went to Montgomery, Ala., to follow the tri-state air tour, later attending the opening of the Panama City, Fla., airport on July 4.

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IMPRESSIONS

(Continued from page 11)

try.

With Bayless W. Haynes installed as president and W. L. Waring, genial treasurer of the Lyons Fertilizer Co., Tampa, as a director, the National Fertilizer Association this year takes on quite a Florida flavor.

In some circles rumor persists that Julian Langner, former disciple of, and assistant to, Aaron Shapiro, and the man who not so long since organized the gigantic naval stores cooperative of the southeastern states, is somehow due to come into the organization picture of the Florida Citrus Exchange. Up in Jacksonville recently we sat down for a cold drink with Julian Langner, and questioned him upon the subject. But he didn't seem to know much about it.

On June 18 up at Estill, S. C., H. E. Johnson, the very well known Haines City citrus grower, who in the trap-shooting world is known as Bright-Eyes Johnson, won the High Over All shoot, breaking 670 out of 700 clay pigeons. On the same occasion he broke 199 out of 200 targets in the South Carolina State Championship, but was ineligible as state champion because of his residence in Florida. Haines City shootists long have figured prominently at the traps; and Harry Johnson is not only upholding the best Haines City traditions but setting new high records right along.

Us crackers do progress. F'rinstance, t'other morning our daughter arose from her late great-grandfather's bed, in the house he built outside Altamonte Springs, in which we live, and after a leisurely breakfast embarked in the car with the rest of the family. About four hours later we all sat down to lunch in a Jacksonville restaurant. Said daugther wishing to go on along for a visit with friends in Atlanta, there was at luncheon some discussion of ways and means. The upshot was that at three o'clock that afternoon we saw her aboard the Atlanta bound transport plane of the Eastern Air Transport lines at the Jacksonville airport. Two hours and forty minutes later 5:40 P. M. E. S. T., 4:40 P. M. Atlanta time she was being greeted by her friends in Atlanta, having had, according to her telegram, a most delightful and enjoyable trip. The world do move; and us crackers move right along with it.

J. Curtis Robinson, of the Growers and Shippers League, who shortly before had made that Jacksonville-Atlanta trip via the plane service reccommended it.

Which brings up the thought that the railroads seemingly are being ground between the upper millstone of the flying services and the lower millstone of the motor bus and the motor trucks. One provides faster, cleaner transportation, and the other lower cost transportation than our long established carriers are prepared just now to offer.

And that inclines us to wonder at the possible relationship between this readjustment of transportation arrangements and our general economic readjustment. Wasn't it in Joseph Hergesheimer's novel Gold that we read of financial unsettlements along around 1840-50, at the time when the theretofore established transportation arrangements, by stage lines and canals, were being greatly disturbed by the then young and coming railroads?

One outstanding difference in the situation, however. The stage lines and the canals were almost hopelessly licked from the start. There is nothing yet to establish that the railroads are licked, if they ever show a willingness to compete rather than to complain. One-half the enthusiasm shown in trying to reduce rates which has been demonstrated in continually raising them might very well show that motor transportation isn't necessarily at lower cost, after all. It is our impression that the most unfortunate thing which could happen to our railroads would be the granting to them of the fifteen per cent increase in freight rates they are asking.

Banning of smoke and cinders in a few fast trains, by the use of air-washing apparatus, shows some railroads are trying to progress in the direction of furnishing clean transportation. But the one place in which the price of eating has not materially declined is in the cumbersome and expensively maintained railroad dining car. Why do not Will Rogers or Arthur Brisbane call attention to the popularity of the dairy lunch these days among all classes, including the billionaires. Will and Arthur, we believe, are the only people who get any attention nowadays.

Once we rode on a day train from St. Louis to Peoria, Illinois. It boasted no Pullmans, but up in one corner of a coach was a small dairy lunch, where four persons could be seated at a time. Our recollection is that the seats were filled during most of the trip. It was apparently the one most popular feature; but as far as our knowledge extends it has never been copied.

Florida grapefruit canneries this season utilized 2,393,705 standard field boxes of that fruit, according to the U. S. Department of Commerce. That means an output of the same number of cases of canned grapefruit, for a field box of fresh grapefruit on the average packs out a case of canned fruit. A tremendous increase, if one pauses to reflect, in the grapefruit canning industry within the few years since it had its beginning in Florida.

Yet if Paul Stanton, the very able manager of Florida Fruit Canners Inc. at Frostproof, is correct in his guess, we have come only a quarter of the way along toward the goal. Paul estimates the markets ultimately will be capable of absorbing ten million cases of canned grapefruit yearly.

From the same governmental source we learn that 61,351 field boxes of oranges went to the canning plants. That, so to speak, is only a bare start.

The difference of opinion between Messrs. Commander and Pratt upon the Exchange's percentage of the crop this 1930-31 season makes us dizzy. We were never too good at figures anyway. In claiming 43.3 per cent, as implied in Mr. Commander's report, the Exchange erred, according to the general manager of the Clearing House, by including fruit sent to the canneries and sold at the packing houses for truck hauling outside, but not crediting other shippers with fruit similarly handled. Of the carlot movement of fresh fruit, on the basis of which Clearing House dues have been paid, the Florida Citrus Exchange, so Mr. Pratt says, had 35.7 per cent to his date of reckoning on June 1. But, after all, what's the difference of 4,324 carloads between friends?

Most interesting to us was the an-

nouncement of the cut in re-icing charges on citrus shipments from California and Arizona, where shipments are pre-cooled and initially iced, or are pre-iced. The reduction amounts to from 65 to 80 percent; and, of all things, was made voluntarily by the western railroads. The Interstate Commerce Commission was out of the picture, and the adjustment was made between carriers and shippers, after thorough research by the U. S. Department of Agriculture. Did you get that word "voluntarily"? It is not a misprint.

From Walter H. Klee, Florida manager for Nitrate Agencies Co., we learned that our old friend Bob Sims, former Orlandoan and now Porto Rican manager for Naco, recently was runner up in the All Porto Rico golf tourney. A lot of our Florida fellows seem to do well competitively when they get outside the state.

MEALY BUGS GETTING ABUNDANT IN CITRUS GROVES THIS SEASON

Reports from over the state indicate that mealy bugs are becoming rather abundant in citrus groves, especially grapefruit, this season, J. R. Watson, entomologist with the Florida Experiment Station, recently stated. These insects proved very troublesome last summer, and unless they are controlled are likely to further reduce this crop whcih is already below normal.

When spraying for mealy bugs, pressure is the important thing. Plain water if applied with sufficient pressure will give fair control, but the addition of an insecticide is highly advisable. Pressure is so important because the insects crawl into cracks and crevices where they are protected.

Rust mites are also becoming plentiful in some groves, and the same spray should get the two. Mr. Watson recommended lime-sulphur, 1 part to 50 or 65 parts of water. This spray, however, should not be applied in the middle of a hot day, for it might burn the foliage and fruit.

If there is no need of fighting rust mites and mealy bugs are plentiful he suggested a spray made from 2 1-3 pints crude carbolic acid, 2 1-3 pounds fish oil soap, and 50 gallons water. Only a good grade of carbolic acid should be used. The crystal form, though more expensive, is safer. Some other spreader may be substituted for the soap.

He mentioned a number of natural enemies as being effective in mealy bug control, but oftentimes we cannot wait for these friends to do the work. The Experiment Station has been raising a number of the Cryptolatæmus lady beetle, obtained from California, and the workers are well pleased with the way it thrives in Florida. Over 5,000 of these beetles have been liberated in Florida groves, and in every grove a month later they were at work.

CITRUS COMMENTS

(Continued from page 12.)

some years to keep the tree in the present condition.—March 13, 1931.

Grove No. 3. The trees in this grove are 13 years old, located on heavy marl. The trees in these portions have not made a satisfactory growth, nor have they had the dark green color of a normal tree. The owner has always given them an ample supply of commercial fertilizer, but the results were not what he expected.

One tree was selected, and on November 13, 1928, 2 pounds of Manganese Sulfate was applied; on January 10, 1930, 2 pounds of Sulphur was applied; on May 26, 1930, 2 pounds of Manganese Sulfate, and on October 3, 1930 another application of 2 pounds of Manganese was applied. The tree was examined on March 13, 1931 and so far no great change is noticed, altho a more healthy growth is showing than on neighboring untreated trees.

In another section of the grove three trees were selectd and on Jan. 10, 1930 1 pound of Manganese Sulfate and 1 pound of Sulphur was applied; on May 26, 1930 2 pounds more of Manganese Sulfate was used and on October 3, 1930 another 2 pound application of Manganese Sulfate was used.

These three trees stand out from the surrounding ones and have a fine dark green color and have a large amount of healthy new growth.—March 13, 1931.

Grove No. 4. The trees treated were 12 years old, oranges, growing on a heavy pure marl. The trees were stunted in growth, with a very poor color. The owner has tried various treatments with no results.

On February 19, 1929, six trees were treated with 2 pounds of Manganese Carbonate, and three trees were treated with 2 pounds of Manganse Sulfate. The Manganese Carbonate treated trees were discarded as we considered the carbonate form of Manganese as insoluble. The trees that had received the Sulfate form of Manganese were given on December 12, 1929 another application of 2 pounds of Manganese Sulfate and 2 pounds of Sulphur, and on May 26, 1930 another 2 pound application of Manganese Sulfate and finally on October 3, 1930 another 2 pound application of Manganese Sulfate.

The trees that had received the Manganese Carbonate have shown no change, while the trees that received various applications of Manganese Sulfate have made quite a lot of improvement, but I should judge that the treatments should be continued. —March 13, 1931.

Grove No. 5. Two trees were selected in this 12 year old grapefruit grove. The trees selected showed poor color and growth. They showed more chlorosis than the remaining trees in the grove. The soil is very heavy marl, and it has been almost impossible to grow trees with any satisfaction.

On October 2, 1928 each tree received 1 pound of Manganese Sulfate. On December 12, 1929 each tree received 2 pounds of Manganese Sulfate and 2 pounds of Sulphur; on May 26, 1930 another 2 pound application of Manganese Sulfate was applied; and on October 3, 1930 another application of Manganese Sulfate was used.

These trees are now for the first time showing beneficial results from the use of the Manganese Sulfate. They are putting on a fine new growth and have a normal dark green color.—March 13, 1931.

Grove No. 6. This is a 13 year old Orange grove, Temple variety. The trees in the section that were treated showed a very poor, pale chlorotic condition of the leaf, with poor vegetative growth. The owner had tried to correct the condition by top dressing with large quantities of trash, brush, etc., but no results were noticed.

On July 21, 1928, 1 pound of Manganese Sulfate was applied to one tree, showing the worst case of Chlorosis; on July 14, 1930 2 pounds of Manganese Sulfate was applied; and on October 3, 1930 2 pounds of Manganese Sulfate was applied.

The treated tree is easily distinguished from the others as the color is better and the growth is better.

Indications are that the tree needs more and larger quantities of Manganese Sulfate.

Grove No. 7. This is a four year old orange and grapefruit grove, a section of which is located on heavy marl. The trees have made an unsatisfactory growth on this soil type. They are chlorotic, with poor yellow color, especially on the oranges.

On January 30, 1928 a pound of Manganese Sulfate was applied to 8 trees. On January 10, 1930 an application of 1 pound of Manganese Sulfate and 1 pound of Sulphur. On May 26, 1930, 2 pounds of Manganese Sulfate was applied, and on October 3, 1930, 2 pounds of Manganese Sulfate was applied.

The treated and untreated trees are readily distinguished by the color. The treated trees, especially the oranges, have a normal color and growth, while the untreated trees are chlorotic yellow in color, with a stunted growth. If the treatment is continued this difference should become more marked.—March 13,1931.

Texas Fruit Yields Increase

Reports from Texas indicate a full crop of fruit for this coming season. Grapefruit, oranges and other varieties are well fruited according to the information now available. The cold injury sustained in 1930 has been outgrown and trees are again on a heavy producing basis.

Co-operative shipping is being discussed, but this method of handling fruit will not be the only one used as a number of large independent shippers seem to be operating successfully.

Fruit Preservatives

The last word in protecting fruit during shipment to market has not ben reached. No method seems to give complete satisfaction, either it is too good or else not good enough. On the one hand, if the fruit is prevented from breathing and wilting normally it must be used in a comparatively short length of time or the flavor changes rapidly for the worse. This result seems to be attained when the fruit is coated too thoroughly with a wax type of protective coating to prevent wilting. In the case normal "respiration" of the fruit does not occur, at any temperature above that used in actual cold storage, the juice rapidly changes in composition and gains a decidedly off taste and may even alter in color. Complaints of such changing in flavor are not uncommon in the more distant consuming market where the fruit must be held at the ordinary prevailing room temperature for any length of time. Some protection seems necessary and advisable, but too good a protection is "not so good".

California Navels Lighter this Year

Florida has a somewhat lighter crop of fruit on midseason and early varieties, including tangerines, than last year. Price conditions appear more favorable when we learn that California also has a lighter crop on navels. They are reported by the State Federal Crop Reporting Service as 74% of normal. In 1930 they ran 95% and in 1929, 77%. The valencia crop is reported at 86% of normal with 95% a year ago and 77% in 1929. This condition is en-

couraging.

Sulphur In Soil Work

Prof. W. L. Powers of the Oregon Agricultural Experiment Station attacked the problem of black alkali, one of the most hopeless types of bad lands found in the arid West, in both irrigated and unirrigated areas. He found that applications of Sulphur, especially when in combination with organic fertilizers rich in nitrogen, will reclaim such land and make it yield good crops. Even normal land was often found to be benefitted by sulphur applications. Alfalfa was especially benefitted in yield and in a richer, greener color when grown on sulphured fields.

Iodine Useful in Plant Work

Another rare element has now been found to be beneficial when added to soils on which tobacco is grown. Investigations by the Bureau of Plant Industry of the U. S. Department of Agriculture have shown that a small amount added to soils improved quality and caused better growth. Too much causes abnormal thickening of the leaf, off color, poor keeping quality and unsatisfactory burning — Journal Chemical Education.

Peculiarity of Potassium

The common chemical element Potassium (Potash) gives off gamma rays similar to X-rays or the gamma rays of radium. The work of Dr. W. Kohlhorster has just been confirmed by Dr. F. Behonnek, working at the State Radiological Institute in Prague.

It was found that potassium chloride (muriate) really emits gamma rays, the intensity of the ray being proportional to the amount of potassium. He also found that there were two groups of gamma rays, one twice as penetrating as similar rays from radium, the other about the same as such rays from radium. However their intensity is low so that very delicate apparatus is needed to detect them. It has been supposed that potassium resembles radium in that it is constantly decaying with the liberation of gamma and other rays, but Dr. Behonnek concludes that the rate of decay is much slower than the generally accepted period.—Journal of Chemical Education.

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FLORIDA AGENT NAMED OFFICIAL OF NATIONAL HOME ECONOMICS BODY

Miss Mary E. Keown, district home demonstration agent, was appointed southern regional director at a recent meeting of the American Home Economics Assn. at Detroit. Next annual meeting in Atlanta next June.

Over 1,600 home economics workers from all over the country attended the recent meeting. Miss Frances Swain, supervisor of home economics in the public schools of Chicago, was reelected president.

CITRUS DEMONSTRATORS PRODUCE AT LOW COSTS

All of the 17 demonstration citrus groves in Highlands County, except one young grove, have made a good profit above operating costs during the past year, County Agent Louis H. Alsmeyer reports. All of the groves would have just about have broken even if they had not greatly reduced production costs by the use of cover crops, inorganic fertilizers, and less cultivation, he said. One of the demonstrations, a 120-acre grove cut costs from October to May, $3,320 below the same period last season.

Palestine Citrus Fruit Exports

In a report to the Department of Commerce, Mr. G. E. Luebben, American Fruit Trade Commissioner, states that Palestine is becoming more important as a producer and source of supply of citrus fruits. The following table shows exports of oranges from Palestine in recent seasons:

Exports of Oranges From Palestine (in thousands of boxes.)

Season	Total	United Kingdom	Continental Europe	Chief continental Europe destinations: Germany	Rumania	N'th'l'ds	Denmark
1926-7	2,025	1,904	120	66	34	—	1
1927-8	1,996	1,729	267	142	52	33	17
1928-9	1,581	1,259	322	191	37	34	23
1929-30	2,696	1,997	698	334	43	35	42
1930-31	1,279	907	372	184	3	—	1

Source: Members of Trade.

Note: 1930-31 statistics up to January 21, 1931--not for entire season.

It will be seen from the above table that Palestine orange exports to continental Europe have increased during the past few years, due largely to an effort to develop other European markets than the United Kingdom.

Expansion of Palestine Orange Markets.

Germany is the principal continental (European) market for Palestine oranges, there having been a noticeable increase in exports to that country during the past few years. There has also been a good increase in exports of Palestine oranges to Denmark. In addition to Germany, Rumania, Netherlands, and Denmark, Palestine exports oranges to Czechoslovakia, Austria, Poland and Switzerland. Combined exports of oranges to these latter countries have risen from 9,000 boxes in 1926-27 to 100,000 boxes in 1929-30, with around 175,000 boxes listed up to January 21st of the 1930-31 season.

Development of Palestine Grapefruit Exports

In recent years, there has been considerable interest in the development of Palestine grapefruit exports. One of the most important activities has been the organization of the Palestine Grapefruit Association, which includes in its membership practically every grapefruit grower in Palestine. One of the functions of the association is the dissemination of information on grapefruit producing and marketing problems. A committee has also been appointed to investigate the marketing of Palestine grapefruit in Europe, with a plan for securing $6,000 for advertising purposes, $3,000 for use in England, $1,000 in Germany, $250 in other countries and $375 for advertising in Palestine itself. The balance of the fund is to be used for research and administrative purposes.

The following table shows exports of grapefruit from Palestine in recent seasons:

Exports of Grapefruit from Palestine (in boxes)

Calendar Year	Total	United Kingdom	Continental Europe	Chief Continental Europe destination: Germany	France	Rumania
1928	1,950	240	1,600	560	725	300
1929	9,070	6,500	1,960	685	325	(1)
1930	22,500	19,400	3,100	3,100	(1)	(1)

(1) Not available.

Note: 1930 statistics represent estimate. Source: Members of trade.

Government Export Regulations

Regulations governing the export of fruit from Palestine have been adopted by the government. These exports cover ports of export, inspection of fruit before export, wrapping of fruit, containers, packing, etc. A copy of these regulations, as outlined by Mr. Luebben, will be furnished upon request by the Foodstuffs Division, Bureau of Foreign and Domestic Commerce, Washington, D. C.

Disposal of Palestine Citrus Crop By Growers

Mr. Luebben states that the Pardess Society is the strong influence back of the Palestine citrus industry although it controls only about 15 per cent of orange tonnage but practically all grapefruit tonnage. It is estimated that 70 per cent of the orange crop is sold on the trees to speculators, who begin to bargain for the crops months before the fruit is ripe. These buyers bear the expense of harvesting and transporting the citrus fruit from the groves to the packing plants, also the packing expense. Upon closing the deal, the grower receives a substantial advance from the buyer, the balance due being paid when the last fruit has been picked.

Palestine citrus-fruit buyers, purchasing fruit on the trees, operate individually, with little prospect of their being organized into any association where they could cooperate. Ordinarily, these buyers pay relatively high prices for fruit on the trees. There has been complaint that when the market goes against them, they frequently ship poor-grade fruit, in order to cut down their losses, thus depressing the market and bringing Palestine oranges into bad repute.

Shipping Routes

Palestine fruit is shipped to continental Europe under ordinary stowage, the journey taking around 21 days. Up to the 1930-31 season, there were no direct shipments to Copenhagen, such shipments going through Hamburg. During the early part of the export season, a good part of Palestine citrus-fruit exports to Egypt go through Port Said.

ROTS OF FLORIDA CITRUS FRUITS

(Continued from page 7.)

age for the whole Florida crop, we can figure out that the total loss on account of rot would amount to about $32 on every $1,000 or 3.2 per cent of sales at terminal markets. This would be about $1,600,000 on a crop selling for $50,000,000. Rightly directed and timely effort ought to save at least one-half of this loss. Note in Table 2 that the average discount per $1.00 selling price is very close to twice the upper percentage of rot for each group, indicating that the buyer takes off as much for further expected rot as for what is already showing up as maximum for the group range.

The relative frequency of stem-end rot and blue mold rot is shown by month in Table 3, which has been compiled from all Federal inspection reports of rot occurring in Florida citrus or arrival at consuming markets, October 1930--April 1931. These reports naturally present a worse average picture of rot conditions, since many of them were requested because the fruit showed excessive decay or other trouble.

It is seen that stem-end rot is responsible for about 98% of the rot reports for September and October, for 67% of those for November, dropping to 11% in December, and then below 4% for each of the next three months, with a slight rise to 6% for April. It is a warm weather trouble. Blue mold rot was responsible for 90 to 98% of the reported cases for the cooler months when the heaviest shipments are made.

Blue Mold

The Penicillium rots are too well known and easily recognized to need any detailed description. They produce powdery masses of blue-green or olive-green spores on the surface of the infected fruits. Such fruits may be found hanging in the trees, in the packing houses, in packed containers during shipment or while held in storage, on the fruit stands, or in the homes of consumers. The tiny spores are blown about by the wind like dust, and one fully decayed fruit can produce enough spores to thoroughly contaminate a soaking tank and other packing house equipment. During our picking and packing season there are frequently periods when oranges and grapefruits are exposed to clouds of Penicillium spores in the open groves. They are further exposed to contact with spores in passing through packing houses, and in all stages of marketing. So long as there is no break in the rind of the fruit there will be no decay from these spores. The Penicillium fungi are unable to penetrate the unbroken rind of healthy citrus fruits. It is through relatively fresh thorn pricks, insect punctures, clipper cuts, scratches, bruises and mechanical injuries due to rough handling that they gain entrance to mature citrus fruits and set up decay.

The Penicillium rots are less difficult to control than other citrus decays if a few proper precautions are observed. They are greatly influenced by temperature and moisture. During warm dry weather these molds give little trouble and no unusual precautions may be necessary.

For this reason we have very little of the Penicillium rots during the first part of the shipping season. As the weather becomes cooler and especially under moist conditions these rots increase rapidly and a spore menace is produced.

Control Measures

(1) Careful Handling. This is the first requirement in blue mold control and the one that is most often violated. The fruit should be carefully handled from the time it is picked until it reaches the packed container for it is during this period that it is most exposed and most liable to infection.

Clipper cuts, rough handling and mechanical injuries that may be caused by the packing machinery should be strictly avoided. This is particularly true when Penicillium rots are numerous in the groves or when weather conditions are favorable for

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FLORIDA'S NEW GREEN FRUIT LAW

(Continued from page 6.)

B. The minimum juice contents of the respective sizes of said grapefruit are as follows, each size being designated by the commercial number assigned to it, based on the number of grapefruit of said size packed commercially in a standard Florida packed box of grapefruit containing two compartments each having inside dimensions of twelve inches by twelve inches by twelve inches.

1. Grapefruit of size 28 shall contain not less than 235 cubic centimeters of juice.

2. A grapefruit of size 36 shall contain not less than 220 cubic centimeters of juice.

3. A grapefruit of size 46 shall contain not less than 207 cubic centimeters of juice.

4. A grapefruit of size 54 shall contain not less than 190 cubic centimeters of juice.

5. A grapefruit of size 64 shall contain not less than 170 cubic centimeters of juice.

6. A grapefruit of size 70 shall contain not less than 150 cubic centimeters of juice.

7. A grapefruit of size 80 shall contain not less than 145 cubic centimeters of juice.

8. A grapefruit of size 96 shall contain not less than 125 cubic centimeters of juice.

9. A grapefruit of size 126 shall contain not less than 105 cubic centimeters of juice.

The tests of the juice contents of grapefruit hereunder shall be based upon the average maximum amount of liquid contents which can be extracted by manual methods from the flesh and pulp of not less than three average individual specimens of said grapefruit of any given size. The Commissioner of Agriculture shall by proper Rules and Regulations to be issued hereunder prescribe the manner and methods of drawing of said samples and of conducting said tests.

Section 4. That within the purpose and meaning of this Act, oranges shall be deemed to be mature only when the ratio of the total soluble solids of the juice thereof to the anhydrous citric acid is not less than eight to one (8 to 1) and when the total soluble solids of the juice thereof is not less than seven and one-half per cent.

Section 5. That within the purpose and meaning of this Act, tangerines shall be deemed to be mature only when the ratio of the total soluble solids of the juice thereof to the anhydrous citric acid is not less than seven to one (7 to 1).

Section 6. In determining the total soluble solids of citrus fruit within the purpose and meaning of this Act the Brix Hydrometer shall be used, and the reading of the hydrometer corrected for temperature shall be considered as the per centum of total soluble solids. Anhydrous citric acid shall be determined by titration of the juice, using standard alkali and Phenolphthalein as the indicator, the total acidity being calculated as anhydrous citric acid.

Section 7. Any citrus fruit not conforming to the above standards set forth in Sections 3, 4, 5, and 6 of this Act shall be deemed and held to be immature within the meaning of this Act.

Section 8. The owner, manager, or operator of each packing house at which it is intended to pack or prepare citrus fruit for market or transportation during the then present or the next ensuing citrus fruit shipping season, shall register such packing house and its location, shipping point, and post office with the Commissioner of Agriculture, not less than ten (10) days before packing or otherwise preparing any citrus fruit for sale or transportation in or at such packing house; and he shall in addition to such registration give the said Commissioner not less than seven (7) days written notice of the date on which packing, or other preparation for sale or transportation between August 31st and December 1st of citrus fruit of the then current or then next ensuing season's crop would be begun. The Commissioner of Agriculture shall issue a certificate of registration to each such packing house registering. It shall be unlawful for any person to operate a citrus fruit packing house or to pack or otherwise prepare for sale or transportation any citrus fruit at such packing house without having previously registered said packing house and given the notice herein required, and receiving and still having unrevoked from the Commissioner of Agriculture a certificate; provided, that no certificate of inspection and maturity of any fruit shall be issued by any authorized inspector except to a person who has registered with the Commissioner during the then current year and has an unrevoked certificate of registration and has given to said Commissioner the notice as required by this Act; nor shall any certificate of inspection and maturity be issued until after payment of the inspection fee imposed by or under the provisions of this Act, such payment to be evidenced as herein required or authorized.

For attempting to ship any citrus fruit immature or unfit for human consumption the Commissioner of Agriculture shall revoke for a period of not less than five (5) nor more than fourteen (14) days the certificate of registration of any packing house whose owner, manager or operator or foreman or other person in authority shall attempt to ship any such citrus fruit as aforesaid, and if the attempt be accompanied by trickery, fraud, bribery or other fraudulent methods or device then

such revocation shall be for such longer period as the Commissioner of Agriculture shall deem necessary to prevent a repetition; and for repeated attempts the said Commissioner of Agriculture shall permanently revoke said certificate and no inspection certificate shall be issued to any packing house whose certificate of registration has been revoked, during the period of such revocation, and no such packing house shall be used for the packing or shipment of citrus fruit during the period such registration certificate is revoked.

Section 9. Every vendor or shipper of oranges and grapefruit between the dates of August 31st and December 1st of each year and every vendor or shipper of tangerines between the dates of August 31st and November 16th of each year shall pay to the Commissioner of Agriculture a fee of two and one-half cents for every box of citrus fruit by him, it, or them sold, transported or delivered for transportation, or when such fruit is sold or transported in bulk or in containers other than standard size boxes shall pay two and one-half cents for each two (2) cubic feet or each eighty (80) pounds of such fruit; provided, however, that if the Governor and Commissioner of Agriculture shall determine, not less than thirty (30) days before the first day of September in any year, that a smaller fee than that herein named will produce sufficient funds to defray the expenses of and incident to the enforcement of this Act during the then next ensuing citrus fruit shipping or marketing season, the Governor may by order and proclamation reduce the fee to be paid during the next ensuing season to such sum as may be deemed sufficient for said purpose.

Such fee shall be due when the fruit is prepared for market or transportation, and payment thereof shall be evidenced by stamps; as hereinafter provided. And it shall be unlawful to sell, deliver, transport, or deliver or receive for transportation, any citrus fruit, payment of the fee for which is not evidenced by proper stamps as may be provided by regulation prescribed by the Commissioner of Agriculture. Provided, however, that the provisions of this Section shall not apply to the transportation or carriage of fruit from grove to packing houses within this State.

Section 10. None of the provisions of this Act shall apply to the sale, transportation or carriage of citrus fruit for the bona fide purpose of canning said citrus fruit, nor shall this Act apply to citrus fruit present or held in canneries for the purpose of being canned therein. Provided, also, that in the event a standard of maturity of grapefruit for cannery purposes shall be fixed by law, and in the further event that grapefruit, upon inspection and testing, may be found at packing houses which fails to pass maturity standard prescribed by this Act for grape-

(Continued on page 32.)

ROTS OF FLORIDA CITRUS FRUITS

(Continued from page 27.)

their development. There is little of practical application that can be advised for freeing the groves of these rots, other than the control of pumpkin bugs or other puncturing insects that sometimes infest the groves and aid materially in the increase of these rots. Packinghouses, trucks, cull bins and containers in which fruit is handled should be kept as free as possible from Penicillium rots and the spores of these fungi. Under certain conditions during per-

TABLE 1.—Condition of citrus fruit on arrival at Cleveland, Ohio. Number of cars per 100 showing various amounts of decay. Based on Federal inspections, September, 1930 - April, 1931.

	Non-cumulative				Cumulative			
	Grapefruit	Orange	Tangerine	All Citrus	Grapefruit	Orange	Tangerine	All Citrus
Total Records	630	468	199	1297	630	468	199	1297
No rot	56.1	26.7	10.0	38.4	56.1	26.7	10.0	38.4
½ to 1% rot	22.2	38.7	47.3	32.0	78.3	65.4	57.3	70.4
1½ to 2% rot	10.6	17.1	22.2	14.7	88.9	82.5	79.5	85.1
3 to 4% rot	5.7	9.6	10.5	7.8	94.6	92.1	90.0	92.9
5 to 8% rot	4.1	5.5	7.0	5.1	98.7	97.6	97.0	98.0
9 to 16%	1.0	1.1	1.5	1.1	99.7	98.7	98.5	99.1
17 to 32%	0.3	0.9	1.5	0.7	100.0	99.6	100.0	99.8
33% and up	0	0.4	0	0.2	100.0	100.0	100.0	100.0

TABLE 2.—Effect of various amounts of rot on selling price

	Index Prices—Oranges				Theoretical showing for 1930-31				
	Philadelphia		Chicago Average		Oranges		All Citrus		
Amount of rot	1924-5	1925-6	1926-7	3 years	Discount per $1 selling price	Boxes per 1000	Loss per $1000 Sales	Boxes per 1000	Loss per $1000 sales
0 to 1 Per cent	$1.00	$1.00	$1.00	$1.00	0	654	0	705	0
1½ to 2 Per cent	1.05	.94	.91	.96	.04	171	6.84	148	5.92
3 to 4 Per cent	.97	.95	.83	.92	.08	96	7.68	79	6.32
5 to 8 Per cent	.84	.86	.82	.84	.16	55	8.80	51	8.16
9 to 16 Per cent	.69	.75	.47	.64	.36	11	3.96	18	6.48
17 to 32 Per cent	.58	.49	.39	.49	.51	9	4.59	7	3.57
33 Per cent and up	—	.26	—	.26	.74	4	2.96	2	1.48

Total loss per $1000, $34.83 $31.93—Equivalent to 3.5 per cent and 3.2 per cent

TABLE 3—Percentage comparison of Stem End Rot and Blue Mold Rot Reports by Months, 1930-31. Federal inspections of Florida citrus on arrival at consuming markets.

Amount of rot	Sept.-Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.	
	SER	BMR	SER	BMR	SER	BMR	SER	BMR	SER	BMR	SER	BMR	SER	BMR
½ to 1%	33.3	2.2	26.4	17.7	5.0	37.3	2.2	38.9	2.5	26.5	0	29.2	0.4	18.1
1½ to 2%	15.1	0	9.4	6.5	3.3	23.0	0.7	30.9	0	26.5	0.6	27.6	1.3	22.4
3 to 4%	10.7	0	8.8	4.1	1.1	12.1	0	14.7	0	14.0	0.6	24.2	1.7	20.2
5 to 8 %	12.9	0	10.6	2.9	1.1	11.0	0.7	8.8	0	20.0	0	10.0	1.7	19.1
9 to 16%	12.9	0	6.5	0.6	0	2.7	0	2.9	0	8.5	0.6	5.5	0.9	11.2
17 to 32%	10.8	0	5.3	1.2	0.6	2.3	0	0	0	1.0	0	1.1	0	1.7
33% up	2.2	0	0	0	0	0.6	0	0	0	1.0	0	0.6	0	1.3
Total	97.8	2.2	67.0	33.0	11.1	88.9	3.6	96.4	2.5	97.5	1.8	98.2	6.0	94.0
Reports	93		170		182		136		200		181		218	

iods of considerable decay, thorough disinfection of the premises may be necessary at frequent intervals. Rotten fruit should be kept out of soaking tanks and washers. All equipment should be thoroughly examined for any possible cause of mechanical injury to the fruit.

(2) Chemical Treatments. In periods of blue mold rots the fruit is often treated with some chemical to kill any surface spores. Various chemicals and solutions have been used and they have their disadvantages as well as their advantages. Such treatments may be applied in the soaking tank or just as the fruit comes from the washers. If the rind of the fruit is sound and unbroken it will not need any chemical treatment to protect it from the blue mold rots. If the fruit has been roughly handled and the conditions for rot development are favorable, the use of a chemical treatment may prevent a considerable proportion of the rot. A mixture of borax and boric acid, in 5% strength is quite effective.

(3) Drying. The fruit should be quickly and thoroughly dried after it comes from the washer. Moisture is necessary for the germination and growth of the Penicillium spores, and even small amounts left on the surface of fruits may be sufficient to start activity. If the fruit is packed while moist, ideal conditions are provided for spore germination, and injured fruit will be more or less likely to develop decay. Sweating of the fruit on sudden removal from cool to warm conditions favors germination of spores and infection.

(4) Refrigeration. Lowering the temperature below 50 degrees F. retards but does not prevent the development of blue mold rot. The sooner the fruit is chilled, as by precooling, the more satisfactory the results.

Stem-End Rots

The stem-end rot presents a more difficult problem to handle. They are caused by either of two fungi, Phomopsis or Diplodia, very different organisims from those of the blue mold group. Both types of stem-end rot are similar in general appearance, and it is not possible to distinguish one from the other through the examination of the outer surface. There are some differences, however, in seasonal occurrence, reactions to temperature and rapidity of development.

Stem-end rot begins with a soft spot at the stem end of the fruit, hardly noticeable at first. It is at this point that the fungus enters, either through the woody stem or appendages of the button. Beginning stages may show no discolora-

tion, but as the rot progresses the affected area of the fruit becomes brown or coffee colored. There is no surface growth of the fungus on the fruits until after they have shriveled and mummified. Spore production does not occur, or rarely so, on affected fruits.

The fungi causing both of these rots grow and produce their spores in the dead bark of citrus twigs and branches. The spores are borne in globular receptacles buried deep in the bark. When the spores are mature, if the bark becomes wet, these receptacles swell, protrude through (and beyond) the bark and exude the spore masses often in thread-like tendrils. The wind and rains scatter the spore through the trees and those coming in contact with the fruit, under favorable conditions start on their work of decay.

The dead wood in citrus trees is the immediate source of stem-end rot, but the development and progress of the decay is largely influenced by moisture and temperature conditions. Warm, rainy weather is a favorable condition for initial infection, much of which occurs before the fruit has matured.

The Diplodia stem-end rot usually occurs in the early shipping season and it will often develop very quickly during periods of warm weather. At temperatures between 90° and 95° F. the fungus is most active, causing complete decay of fruit in two or three days after the first indication of rot. Diplodia stem-end rot has given considerable trouble in the coloring rooms during the past few seasons, especially where temperatures were allowed to run high and the ventilation was poor and excessive dosages of gas were given. Excessive rot under such conditions often occurs and it may run from 10% to 40% following a seventy-two hour coloring period. As the weather becomes cooler the Diplodia rot shows a tendency to decrease; however, a certain percent continues throughout the season.

The Phomopsis stem-end rot develops at a somewhat lower range of temperatures than Diplodia, and may be expected to show up during periods intermediate between the warmer and cooler parts of the shipping season. It, too, is increased by improper coloring room methods.

Control

The control of citrus stem-end rots will require the cooperation of all parties concerned in handling the fruit. The grower has his responsibility. Since dead twigs and branches are a source for infectious material the citrus trees should be kept reasonably free from dead wood and all agencies that tend to cause dead wood.

(1) Removal of dead wood. A certain amount of pruning out of dead wood should be done from time to time. This reduces Dipilodia stem-end rot considerably, but can not be relied upon for complete control. Scale and other insects are responsible for large amounts of dead wood, also lack of plant food, drought and flood conditions, and these should be taken care of at proper seasons. Any practice that has a tendency to weaken the trees should be avoided, for weakened trees generally accumulate the largest amounts of dead wood. The older bearing groves will be more subject to stem-end rot than younger groves owing to the accumulation of dead wood.

(2) Special spraying for the control of stem-end rot alone will hardly warrant the effort or expense. It has been found, however, that an application of 3-3-50 Bordeaux mixture applied for melanose control in late April or early May has given a considerable degree of protection against Phomopsis stem-end rot.

(3) Care in coloring. Use fruit on which the color has broken so as not to require prolonged coloring-room treatment. This is especially important for fruit trees with considerable dead wood, or for other reason suspected of being subject to stem-end rot. Do not let coloring room temperatures go much above 85° F. Provide for adequate ventilation. Avoid excessive dosages of ethylene or stove gas.

(4) Chemical treatment. The solution of borax and boric acid used for blue mold control will reduce stem-end rot.

(5) Refrigeration. Since the temperature range is relatively high for both forms of stem-end rot, lowering of the temperature below 55° F. is a very effective means of control. This should be promptly done, especially with fruit that has been through warm coloring rooms. Precooling is very desireable in such case. Dealers and consumers should keep the fruit in cool places.

(6) Prompt handling. During warm weather, when stem-end rots prevail, it is important to move the fruit as promptly as possible to market and through distributing channels to final consumption. Both stem-end rots are rather slow in developing their full effect at average daily temperatures at northern markets during even the warmer portions of the Florida shipping season. If not subjected to coloring room incubation or to the sometimes tardy handling at the start of the packing season, much of the loss from stem-end rot will be avoided simply by hastening consumption of the fruit.

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FLORIDA'S NEW GREEN FRUIT LAW

(Continued from page 29)

fruit but does pass the standard of maturity prescribed by law for cannery grapefruit, such grapefruit may (in lieu of destruction) be diverted to a cannery to be canned therein, such diversion to be safeguarded by rules and regulations prescribed by the Commissioner of Agriculture.

Section 11. It shall be the duty of the Commissioner of Agriculture to furnish the vendors and shippers of citrus fruits with such stamps to be attached to the packages of fruits prepared for sale, transportation, or delivery for transportation, or to the certificate of inspection and maturity, herein provided for, or to the shipping receipt, as the Commissioner of Agriculture may by rule or regulation prescribe.

Section 12. It shall be unlawful for any authorized Inspector to make or deliver a certificate of inspection and maturity of any citrus fruit upon which the inspection fee hereby imposed or authorized has not been paid, or to make or issue any false certificate as to inspection, maturity, or payment of inspection fees.

Section 13. All citrus fruit prepared for sale or transportation, or which is being prepared for such purposes, or which has been or is being delivered for sale or transportation, that may be found immature or otherwise unfit for human consumption upon inspection and testing, shall be seized and destroyed by a Citrus Fruit Inspector or the Sheriff of the County where found, as may be provided by regulations prescribed by the Commissioner of Agriculture.

Section 14. That the Commissioner of Agriculture may in each year employ as many Citrus Fruit Inspectors for such period or periods, not exceeding one (1) year, as said Commissioner shall deem necessary for the effective enforcement of this Act.

All persons authorized under the provisions of this Act to inspect and certify to the maturity of citrus fruit shall be governed in the discharge of their duties as such Inspectors by the provisions of this Act and by the rules and regulations prescribed by the Commissioner of Agriculture as here in authorized, and shall perform their duties under his direction and supervision.

Section 15. The salary of the Chief Citrus Fruit Inspector shall be Three Hundred ($300.00) Dollars per month, and of Chief Laboratory Inspector Two Hundred and Fifty Inspector Two Hundred and Fifty the salary of each of the other inspectors shall be at the rate of One Hundred and Fifty Dollars ($150.-00) per month, and in addition thereto each Inspector shall receive his or her necessary traveling and other expenses incurred by him or her in the discharge of his or her duties as such Inspector, which shall be paid upon approval of accounts therefor by the Commissioner of Agriculture. The Commission is hereby authorized and empowered to employ such additional field and other agents and clerical assistants, at such times and for such periods and to incur and pay other expenses including traveling expenses of the Commissioner of Agriculture, during the citrus fruit season as may be necessary for the effective enforcement of this Act, and to secure the payment of the inspection fees hereby imposed, or that may be imposed under the authority of this Act.

In cases of emergency or necessity when no Citrus Fruit Inspector is available for inspection of a particular lot of citrus fruit, the Commissioner may designate some fit and competent individual to inspect, test and certify as to such lot of fruit. Certificates made or issued by such designated individuals shall be signed by him or her as "Special Citrus Fruit Inspector:" He or she shall not be required to give any bond, but shall be subject to the penalties imposed by this Act for violation of any of the provisions hereof.

Section 16. The Commissioner of Agriculture shall, from time to time, as he may deem to be expedient and necessary, make and promulgate rules and regulations for carrying out and enforcing the provisions and regulations of this Act.

Section 17. For the purpose of enforcing the provisions of this Act as well as the regulation of the Commissioner of Agriculture to be issued hereunder citrus fruit inspectors are hereby empowered and authorized to enter into any packing house at any hour of day or night and to have and demand access and admission to any enclosed portion of said packing house. Said Citrus Fruit Inspectors are likewise empowered and authorized to inspect all packing house records pertaining to receipts from groves and to details of receiving, handling, running, processing or packing citrus fruit.

Section 18. In the event that any packing house packing citrus fruit during the inspecting season shall have present therein or shall be processing or shall be packing two or more lots of fruit simultaneously it shall be the duty of the manager or other person in charge of said packing house to notify the Citrus Fruit Inspector conducting inspections at said packing house of said fact and to furnish to said inspector full information as to the source of said several lots of fruit and the number of boxes in each several lot.

Section 19. It shall be unlawful for any person to obstruct, hinder, resist, interfere with, or attempt to obstruct, hinder, resist, or interfere with any authorized Inspector in the discharge of any duty imposed upon or required of him or her by the provisions of law or by any rule or regulation prescribed by the Commissioner of Agriculture as herein authorized, or to change or attempt to change any instrument, substance, article or fluid used by any such inspector or emergency Inspector in making tests of citrus fruit.

Section 20. Any person who shall violate any of the provisions of this Act or do or commit any act herein declared to be unlawful, or shall violate any reasonable rule or regulation made and promulgated by the Commissioner of Agriculture in pursuance of the authority therefor herein given, shall be punished by a fine of not less than Fifty Dollars ($50.00), or by imprisonment in the State Prison for not more than Five (5) years, or by both such fine and imprisonment in the discretion of the Court.

Section 21. All money received by the Commissioner of Agriculture for inspection fees and certificates of inspection and maturity shall be paid by him to the State Treasurer, who shall deposit said money to account of the "General Inspection Fund."

All salaries and other expenses incurred in the execution and enforcement of the provisions of this Act shall be paid out of such "General Inspection Fund," by vouchers approved by Commissioner of Agriculture and warrants issued thereon by the Comptroller.

Section 22. If any provision, section, sub-section, sentence, clause or phrase of this Act is for any reason held to be unconstitutional or invalid, such holding shall not affect in any way the validity of such parts of this Act as shall not be in violation

(Concluded on next page)

The Clearing House To Continue Operations

Definite announcement that the Florida Citrus Growers Clearing House Association will continue to function for the industry in Florida comes from Winter Haven in a statement authorized by the officials of the Clearing House Association.

The third annual meeting of the Association is being held at Winter Haven as this issue of The Citrus Industry goes to press. At this meeting the plans of the organization will be submitted to the membership and growers will be asked to express themselves as to the advisability of any changes or improvement in methods of operation.

The statement issued from Winter Haven is, in part, as follows:

After a delay of some six weeks during which officials of the Clearing House have done everything in their power in an unsuccessful effort to induce the Florida Citrus Exchange to remain as a shipper member, growers and shippers still affiliated with the Clearing House have set in motion the machinery for carrying on industry work for the coming season.

Plans for the coming year's work, together with brief reports on the past season's activities, will be given to the growers attending the third annual meeting of the Clearing House which will be held in the Williamson Theatre, Tuesday, July 14, beginning at 11 A. M.

Withdrawal of the Exchange from the Clearing House will necessitate some reorganization of the Clearing House Board of Directors and the Committee of Fifty in that some of the members in both these groups have decided to remain with the Exchange. These members will of course be resigning from the Clearing House although most of them are remaining in office temporarily so as to be able to carry on routine affairs of the Clearing House until their posts can be filled. In the case of resignations of any Directors from the state-at-large the Board as a whole will appoint a new Director or Directors to succeed any resigning member. Replacement of any district Director will be done by a special election held in the district of the Director concerned—the members of the Committee of Fifty in the district nominating three growers, one of whom will be elected by the grower members who represent them on the Board.

Replacement of the members of the Committee of Fifty who resign from the Clearing House, as provided for in the Charter and By-laws, will be made by appointment by the district director. Indications are that there will be at least four district Directors to be elected, Messrs. J. T. Swann, District 2; E. E. Truskett, District 3; W. F. Glynn, District 4; Phil C. Peters, District 5; having signified their intention to remain with the Exchange. The Committee of Fifty members in each of these four districts are already making plans for nominating and electing the Director for their district. Provisions of the Charter and By-laws make it necessary to give notice of at least thirty days for the holding of special elections, hence the work of filling the district Director vacancies is expected to be finished some time next month.

Further detailed plans of operation were taken at a meeting of the Board held July 7 at which various recommendations annually made by the Operating Committee were received and approved. Among these recommendations was that providing for a retain of two cents per box for the coming season, one cent of this to be devoted to general expenses, and one for inspection, advertising, and handling of general industry matters. At a meeting of the shipper members held July 1 the following were appointed as members of the Operating Committee to serve during the coming year:

W. H. Mouser, Orlando; L. Maxcy, Frostproof; R. B. Woolfolk, Orlando; R. D. Keene, Eustis; John S. Barnes, Plant City; W. G. Roe, Winter Haven; L. P. Kirkland, Auburndale; C. N. Williams, Orlando; and Ed. Welles, Arcadia.

Following nomination of the members, the Board of Directors at their meeting July 7, received the names of the Operating Committee, approving all of the nominations made by the shippers. This action is governed by the Charter and By-laws and is indelible proof that ultimate authority is vested in the Board.

FLORIDA'S NEW GREEN FRUIT LAW

(Continued from preceeding page)

of the Constitution, or shall not otherwise be invalid.

Section 23. All laws in conflict with the provisions of this Act are hereby repealed.

Section 24. This Act shall take effect August 1st, 1931.

Approved June 10, 1931.

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NEW CALIFORNIA ACT CHANGES STANDARDS OF CITRUS FRUITS

(Continued from page 9)

legislature that the other maturity standards prescribed in this section shall prevail; provided, further, that grapefruit produced outside of this state under climatic conditions similar to those prevailing in the area south and east of San Gorgonio Pass and offered for sale in this state shall meet the same maturity standards as those prescribed for grapefruit produced south and east of said San Gorgonio Pass.

" 'Twenty-five per cent characteristic yellow color' in the case of grapefruit is defined as that color designated by the Munsell color notation as hue ten yellow, value five, chroma three, (10Y5|3), and '70 per cent colored' as hue seven yellow, value seven, chroma, six (7Y7|6). Grapefruit shall be considered as having exceeded 25 or 70 per cent color if the average hue of the surface of each fruit is numerically less than ten yellow and seven yellow, respectively, regardless of the other components of the color."

FOUR LAWS PASSED AT LAST SESSION OF TEXAS LEGISLATURE TO HELP VALLEY CITRUS GROWERS

(Continued from page 8)

mature citrus which would destroy whatever prestige has been built up for the Valley product. W. A. Canon, our marketing chief, and Mr. Del Curto, both are confident the law can be successfully applied. We have, however, safeguarded against contingency. If grove testing proves impractical or unsatisfactory for other reasons, the commissioner of agriculture is authorized to promulgate emergency measures.

Maturity Test is Changed

Changes also were made in the maturity test itself. Texas citrus fruit must meet the highest sugar test and the highest sugar-acid ratio standard of any fruit in the world before it is adjudged fit for human consumption. The new law modifies this test somewhat by placing it on a sliding scale to take care of differential in liquid content, without, however, disturbing the essential amount of sugar required. Best scientific data available was consulted in revising this formula, set forth in detail in the law.

During the coming season our inspectors will, under this law make extensive experiments in juice content and specific gravity as a basis for maturity content. These experiments possibly will pave the way for further revision and refinement of our scientific maturity test.

Texas citrus growers are pioneering in their experiment with grove inspection. If successful, the system no doubt will supplant methods now used in other citrus states, and for that reason the coming season will be watched with great interest by citrus growers throughout the country. The season will test the new law adequately as prospects now are for an excellent harvest in the Magic Valley.

In developing a new agricultural industry, the ideal—indeed, the fundamental rule—is for the industry to develop its own planting stock. If new varieties entered in very small quantities, under strict control, and propogation then was carried out locally, the disaster of pest invasion would be largely avoided. Short of this ideal, our states must protect their new industries. Hence the necessity for quarantine regulations, which must be constantly changed to meet changing conditions so that they will be at all times best suited to protect the best interests of the industry.